

GRANGER COUNTRY

Edited by LLOYD LEWIS and STANLEY PARGELLIS

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GRANGER COUNTRY

A Pictorial Social History of the Burlington Railroad
Edited by LLOYD LEWIS and STANLEY PARGELLIS

HERE is a graphic picture of the pioneer farmer and the western trek that made "the bread basket of the nation" seen through an eventful era in the history of rich states linked by a famous railroad. From wagon-train and "iron horse" to the dome-car of a Zephyr, from sod-houses to contour farming, here is the whole

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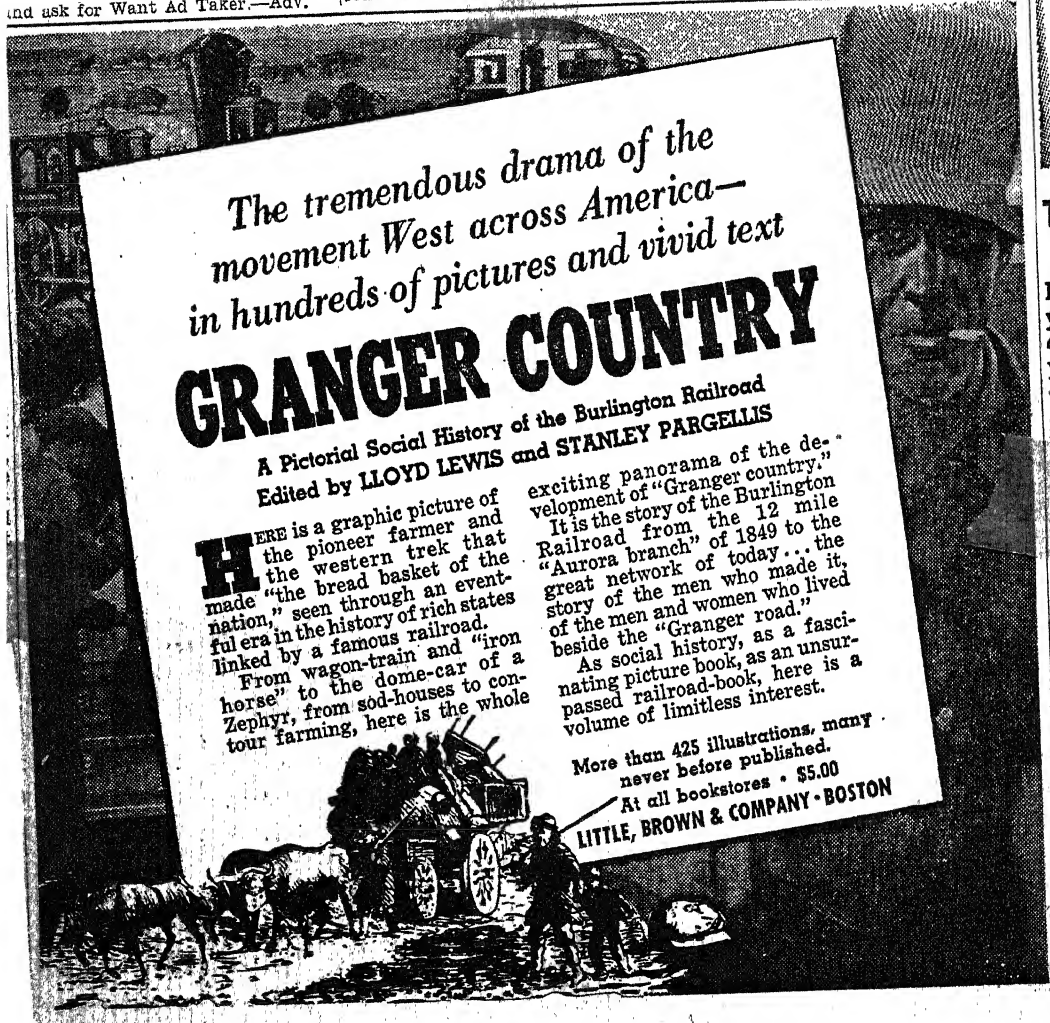
It is the story of the Burlington Railroad from the 12 mile "Aurora branch" of 1849 to the great network of today... the story of the men who made it, of the men and women who lived beside the "Granger road."

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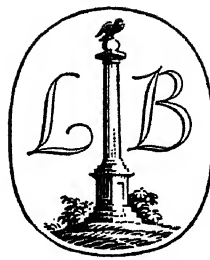
*A PICTORIAL SOCIAL HISTORY OF
THE BURLINGTON RAILROAD*

Edited by

LLOYD LEWIS

and

STANLEY PARGELLIS



Little, Brown and Company · Boston · 1949

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PREFACE

SOME years ago the Burlington Railroad, first great corporation in the country to take such action, deposited in the Newberry Library its central office and land office papers up to 1901, for the use of qualified scholars. The Records occupy some 1800 feet of shelf space and contain more than a million letters, a remarkable body of material for the American economic and business historian. Several scholarly books have been and are being written from them, and a guide to the Records has been prepared and printed for the use of students. The compilers of this social history (both of them members of the Newberry staff) have made use of these archives in their effort to suggest in pictorial form the outstanding importance of railroads, especially those of the Mississippi Valley and Great Plains sections, in promoting the development and growth of the country.

The compilers have exercised their own judgment in the selection of facts to emphasize, limited only by the mischievous refusal of dead-and-gone artists and photographers to have been on the spot when wanted. The Burlington Railroad has given us full co-operation in making available the photographs in its archives and in answering queries about the road today. Without the splendid series of old pictures carefully assembled by Val Kuska, Colonization Agent of the Burlington at Omaha, Chapters IV and V would have been noticeably thinner.

All unacknowledged pictures are from the Burlington Archives, to which the various Burlington veterans' associations have made many substantial contributions. Most of the modern pictures in Chapters VII and VIII were taken in 1948 by two talented photographers, Esther Bublely and Russell W. Lee, to whom our thanks are due, as well as to Roy Stryker for his helpful suggestions and advice.

Mr. James Olson of the Nebraska State Historical Society generously put at our disposal his rich collection of pictures of the commonwealth in which the Burlington has more miles of track than in any other. That, incidentally, is the reason for the somewhat disproportionate amount of space devoted to Nebraska.

To all those members of the Newberry staff who assisted us in every way that an able staff can, we lie under special obligation.

L. L.
S. P.

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CHAPTER ONE. BLIZZARD, FLOOD AND MUD

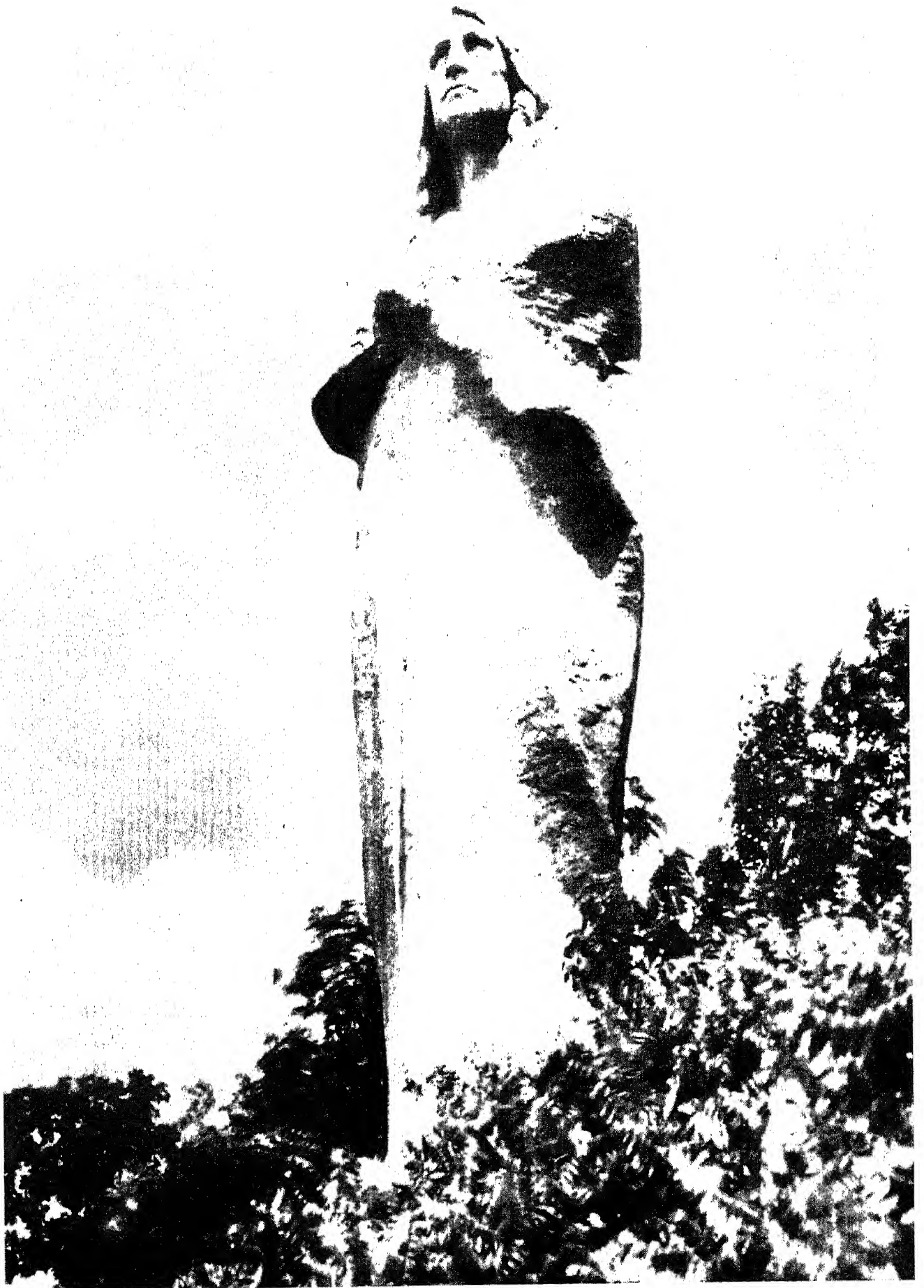
IT is a coincidence that the word "grangerism," meaning "the practice of illustrating a book with prints taken from other books of photographs," should describe the method we have chosen to tell the history of "the Granger road," as the Chicago, Burlington & Quincy Railroad is called in the agricultural states of the Middle West and along the eastern slope of the Rocky Mountains.

The method has seemed to us a fitting one in that the history of this, one of the largest American railroads, is in a major sense the history of the states which it serves and in which it grew — and the history of those states has been richly preserved in pictures.

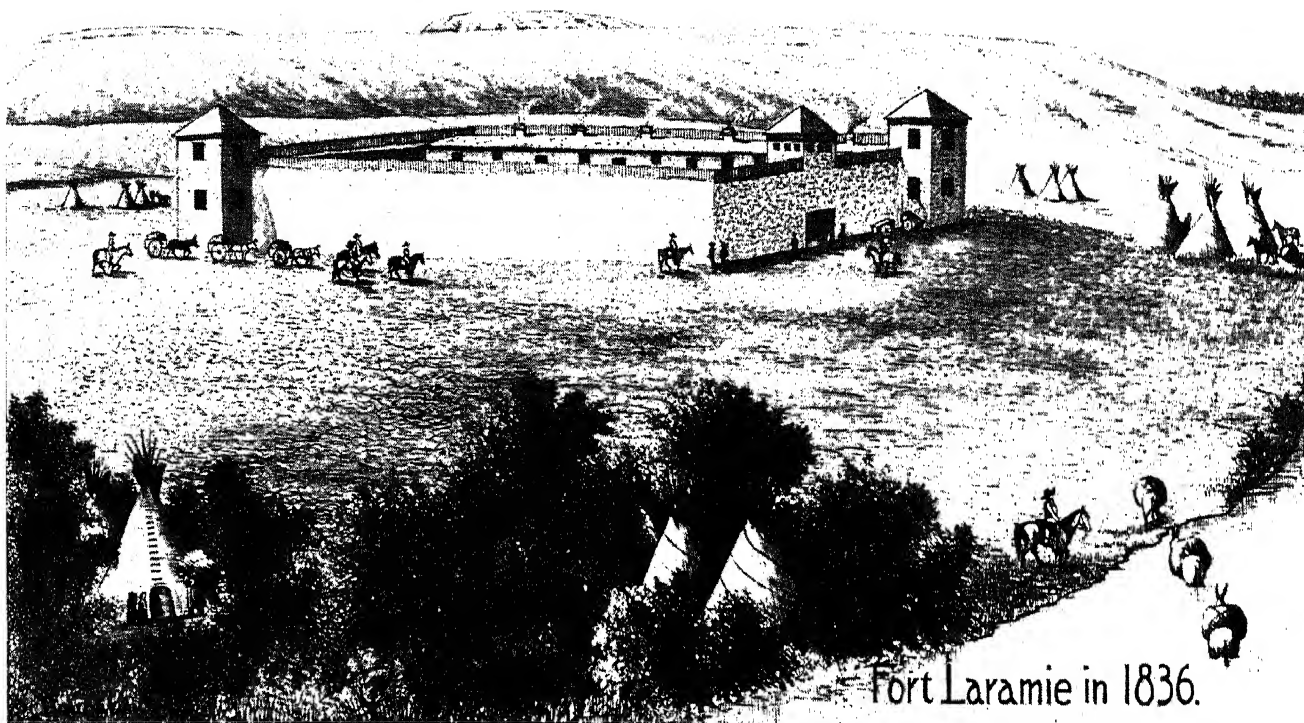
Known for a time as "the Far West" and later as merely "the West," the regions served by the Burlington System include the heart of the famous corn-and-hog country, the wheat fields that are known as "the Nation's Breadbasket," the cattle ranges, the beet fields. Timber, minerals, manufactured products have all had their place in the rise of this railroad, but it was the granger, the farmer, who dominated the thoughts of the Burlington's managers just as he dominated the life of the states through which the Burlington has run.

On February 12, 1949, when the Granger Road celebrated its centennial, its track lay in fourteen states, running at length through eight of them — Illinois, Wisconsin, Iowa, Missouri, Nebraska, Colorado, Wyoming and Texas — and touching corners or borders of six more — Kansas, Minnesota, Kentucky, South Dakota, Montana and New Mexico.

To show something of the relation of the railroad in general, and this one railroad in particular, to the social life of the fourteen states has been our purpose. In Chapter I our concern has been briefly to illustrate the impressions of these mysterious Western lands received by prospective emigrants "back East" — the physical and social factors which at once drew and repelled the people who at one time or another felt the urge expressed in the motto "Go West, young man."



Lorado Taft's statue of Chief Black Hawk, near Oregon, Illinois.



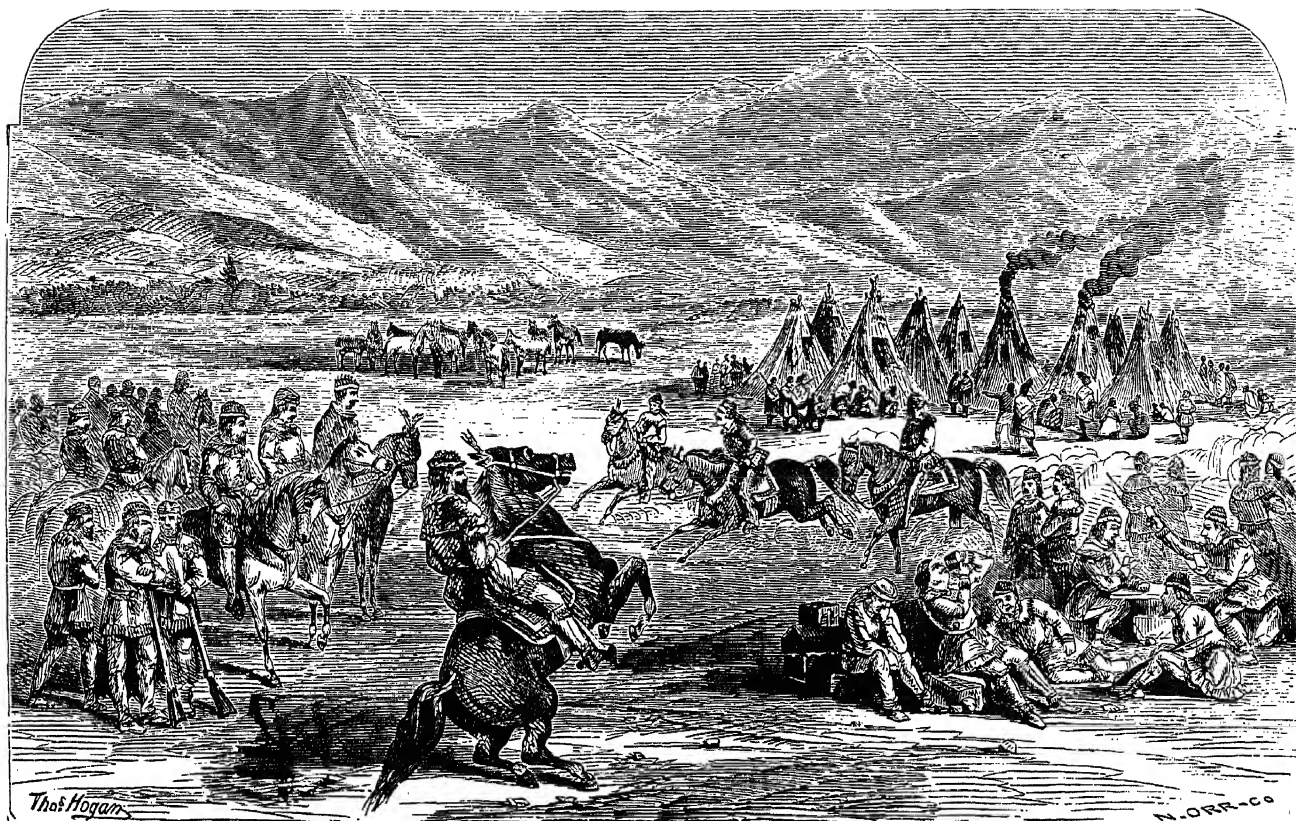
Courtesy Wyoming Historical Department

Public hunger for the open lands of the West grew sharper in the old states of the Union as the 1830's brought decisive news. Accounts of the United States Army's victorious war against Chief Black Hawk (*preceding page*) in northern Illinois and southern Wisconsin during 1832 advertised the fertility of prairie lands ready for settlement, now that the Indians were to be moved across the Mississippi River.

The Texan War of Independence was won at the Battle of San Jacinto on April 21, 1836, with the triumphant general, Sam Houston, receiving a Mexican bullet in the ankle (*opposite page*). The victory boomed interest in the Southwest.

That same year 1836, Fort Laramie (*above*), the first fortified post in the wilds of Wyoming, was turned by the American Fur Company into the center of the Rocky Mountain trapping trade, and back from this dawning frontier drifted increasing numbers of romantic stories of the empire which the Plains and the Mountains constituted. Thrilling tales of the armies of trappers came east to civilization, some of them describing the small armies of fur hunters — as, for example, the rendezvous of several hundred employees of the Rocky Mountain Fur Company in the Big Horn River Country of Wyoming in 1828 (*opposite page*).

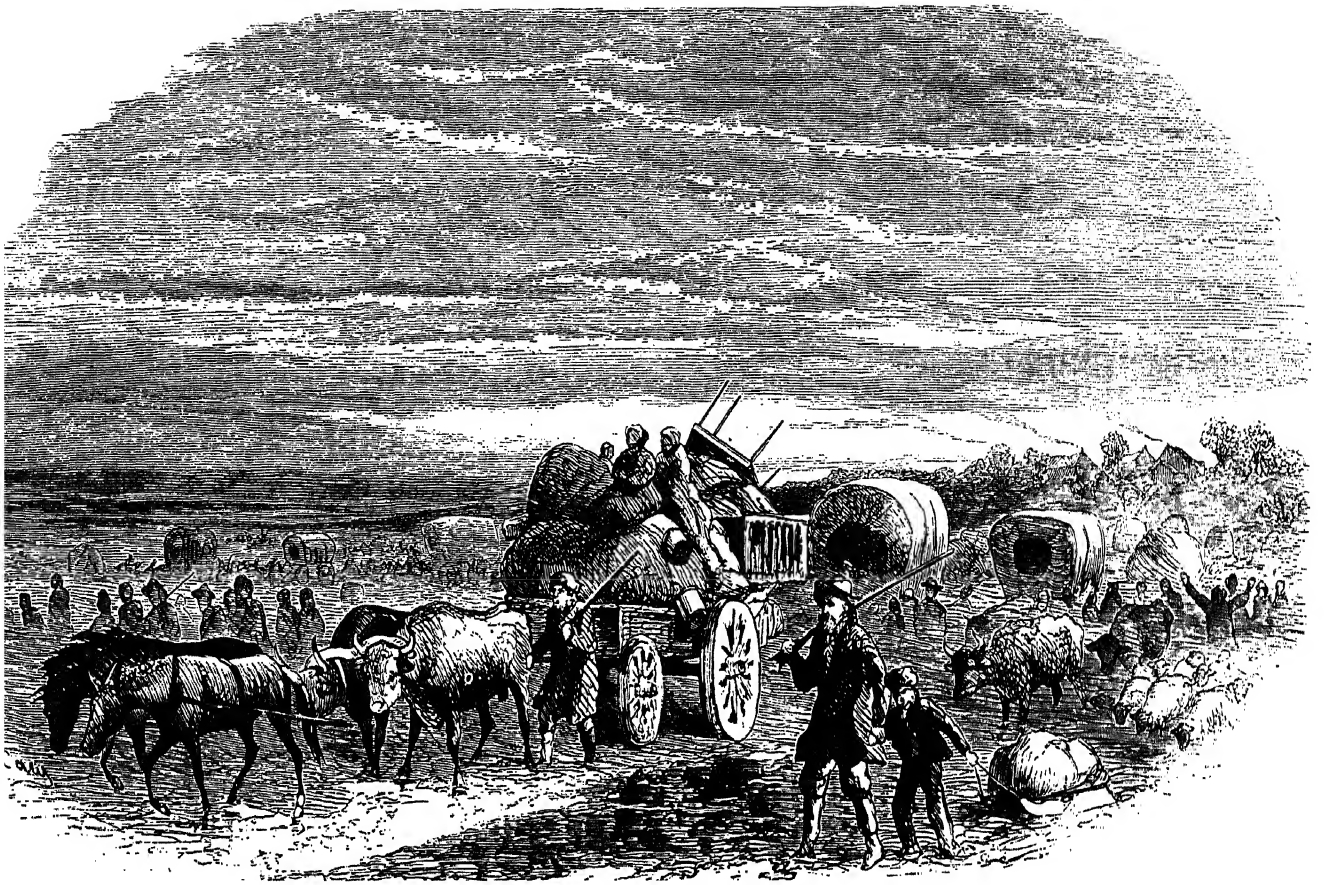
Trails to the new regions grew deeper and wider as adventurers, travelers and then emigrants went west, but Fort Laramie, standing on the Oregon Trail, was as well known as any other trading post. To aid and protect the ever-growing stream of emigrants, the United States Government in 1849 took over the fort as an army post and as such it remained to the end of the Indian wars a generation later, a focal point for adventure, tragedy, heroism, suffering and victory.



From "The River of the West," by Frances Fuller Victor, Hartford, 1870



From "The Life of Sam Houston," by C. E. Lester, New York, 1855



From "The Rocky Mountain Saints," by T. B. H. Stenhouse, New York, 1873

Although the Mormons were, in the 1840's and 50's, a derided and persecuted religious sect, their Homeric treks across the Plains and Mountains stirred the imagination and admiration of the country. The first party, shown above, setting out for California from Nauvoo, Illinois, in February 1846, drove with general safety across the sod of Iowa to Council Bluffs on the Missouri River, thence up the Valley of the Platte and the North Platte, past Scott's Bluff to Fort Laramie and on to Fort Casper, where the mountain passes opened a way to the Southwest. On the morning of July 24, 1847, the Mormons' leader, Brigham Young, looking out from his sickbed in a wagon, saw ahead the Valley of the Great Salt Lake and said, "This is the place." California was forgotten, and the Latter-day Saints immediately began transforming a desert into a garden, a feat destined to be recognized as one of the most fabulous in Man's conquest of Nature.

Most celebrated of the many Mormon parties that were to follow was the group of 800 who, arriving from Great Britain and Scandinavia in 1856, were so poor that they could not buy wagons and oxen. They attempted to walk the 1300 miles, pulling their belongings in handcars. When winter caught them in the mountains, 100 to 200 died and it took active rescue work by riders from Salt Lake City to bring the remainder to Zion by the following spring.

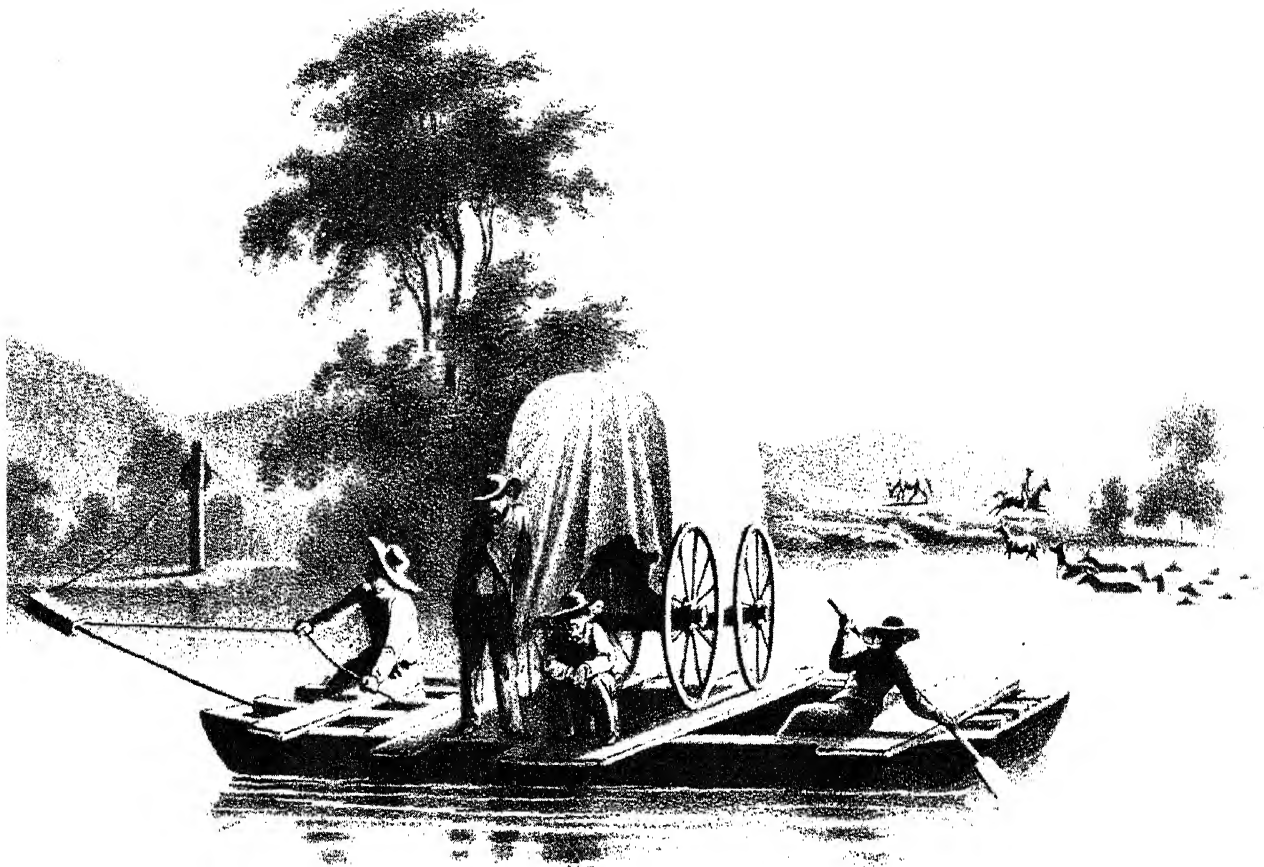


From "The Rocky Mountain Saints," by T. B. H. Stenhouse, New York, 1873

"The divine hand-cart," as it was called by the Mormons, was pulled with comparative ease through Iowa and Nebraska, but in mountain snows it often broke down and remained unburied beside the grave of its owner. The death of one Mormon mother, Rebecca Winters, on the trail had a dramatic and touching commemoration years later, at the hands of the Burlington Railroad which passed that way.



From "The Rocky Mountain Saints," by T. B. H. Stenhouse, New York, 1873



From "Exploration and Survey of the Valley of the Great Salt Lake," by Howard Stansbury, Philadelphia, 1852

Emigrants to Oregon, California and Utah in the 1850's and 60's always remembered crossing the North Fork of the Platte near the mouth of Deer Creek (*above*) with wagons ferried across at two dollars each and with animals swimming the river. By 1867 another ferry (*below*) on the Platte was rowing emigrants over and "charging \$5 per head, biped or quadruped." In crossing the half-mile span this ferryboat would drift downstream a mile or more in the swift current and must then be dragged back on land by ox team to a point from which it could start its return trip.



From "Harper's Weekly," August 3, 1867

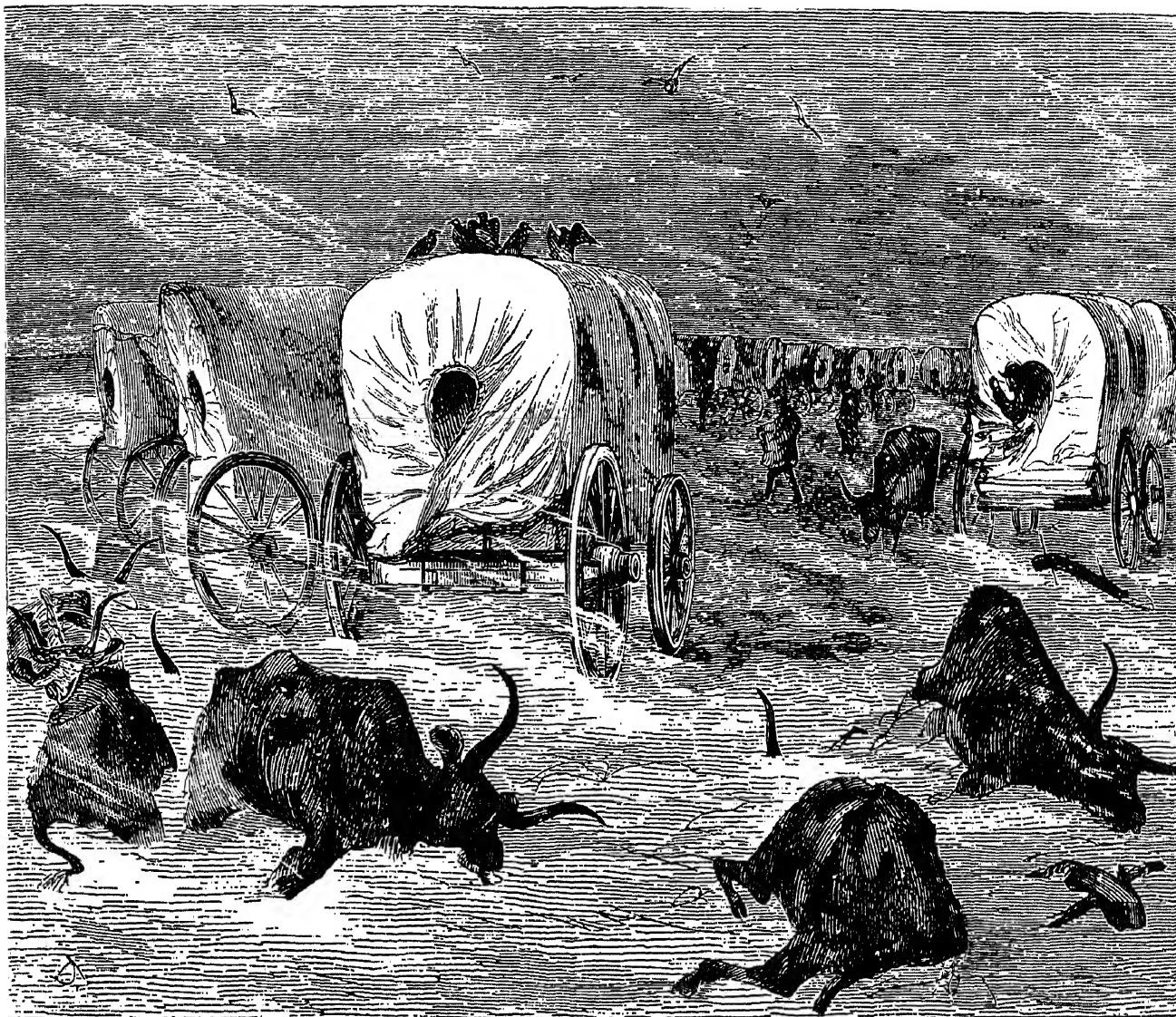


From "Exploration and Survey of the Valley of the Great Salt Lake," by Howard Stansbury, Philadelphia, 1852

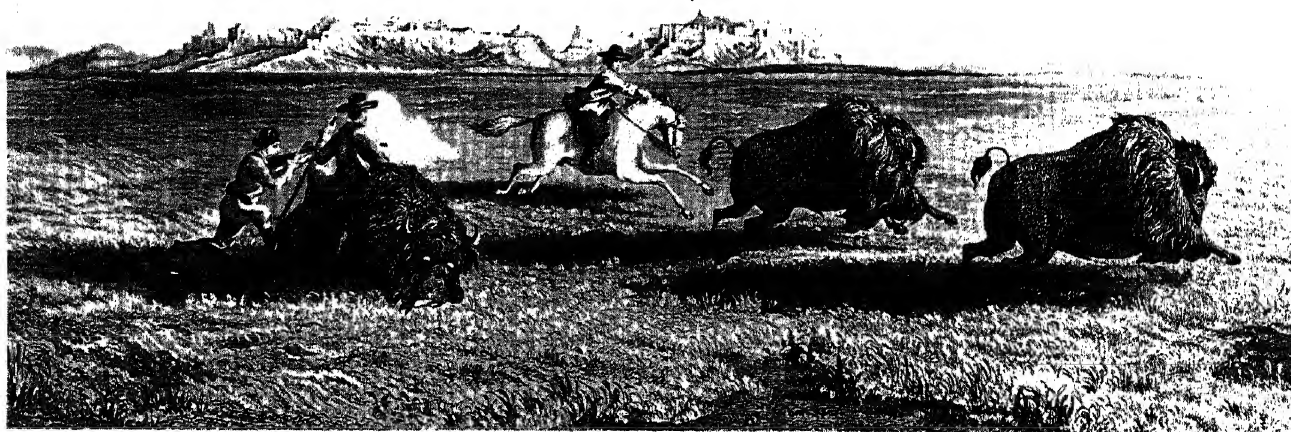
Indians captured by Mormons (*above*) seemed more squalid than dangerous in the 1840's and 50's, and tribes characteristically fought each other rather than whites. One emigrant party (*below*) watched forty Cheyennes fight twenty-five Pawnees for hours without damaging anything except three ponies, one dog and the posterior of one fat brave.



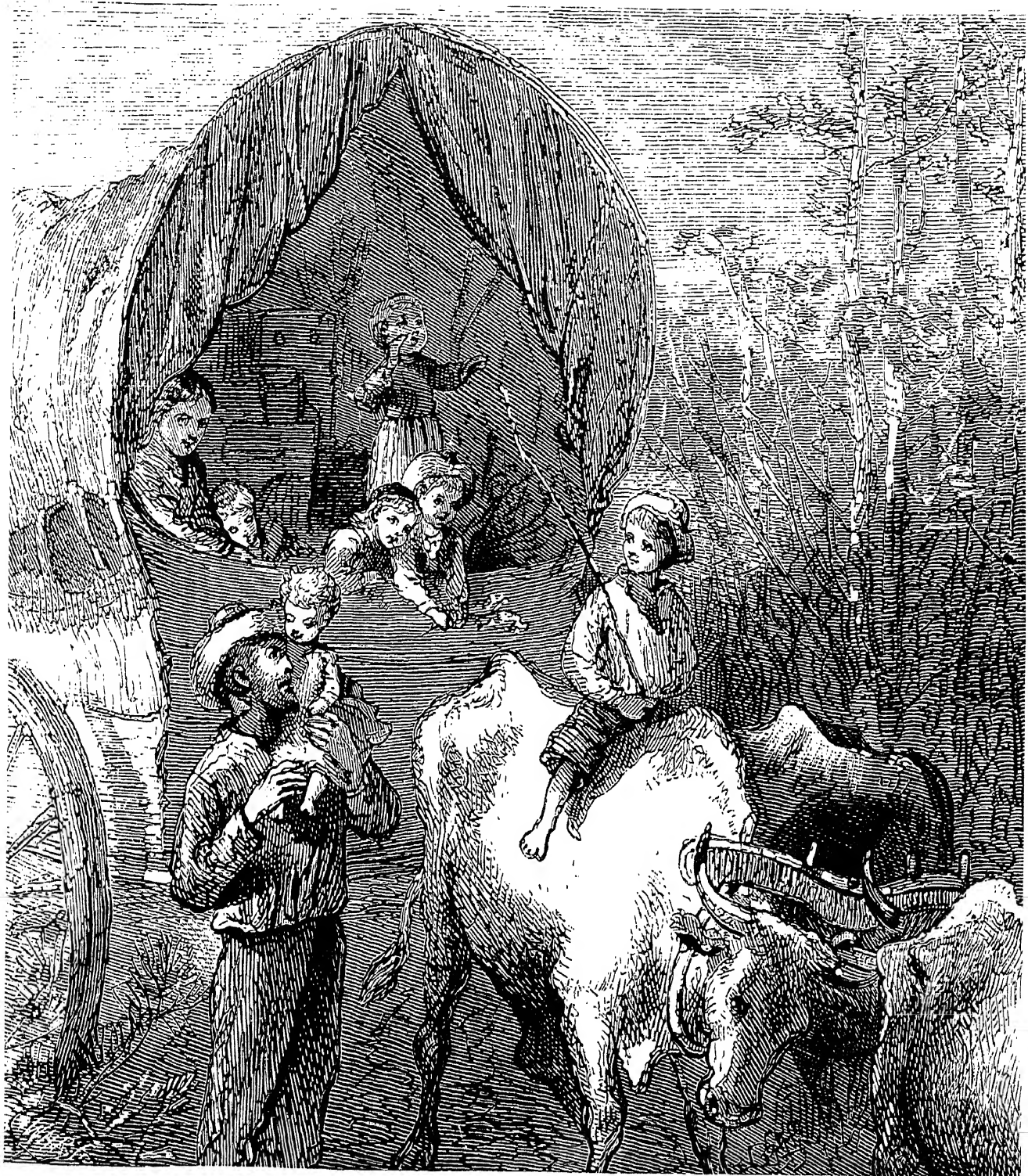
From "Buffalo Land," by W. E. Webb, Cincinnati, 1872



From "Harper's New Monthly Magazine," June 1869



From "Route from Liverpool to Great Salt Lake Valley," by Frederick Piercy, Liverpool, 1855



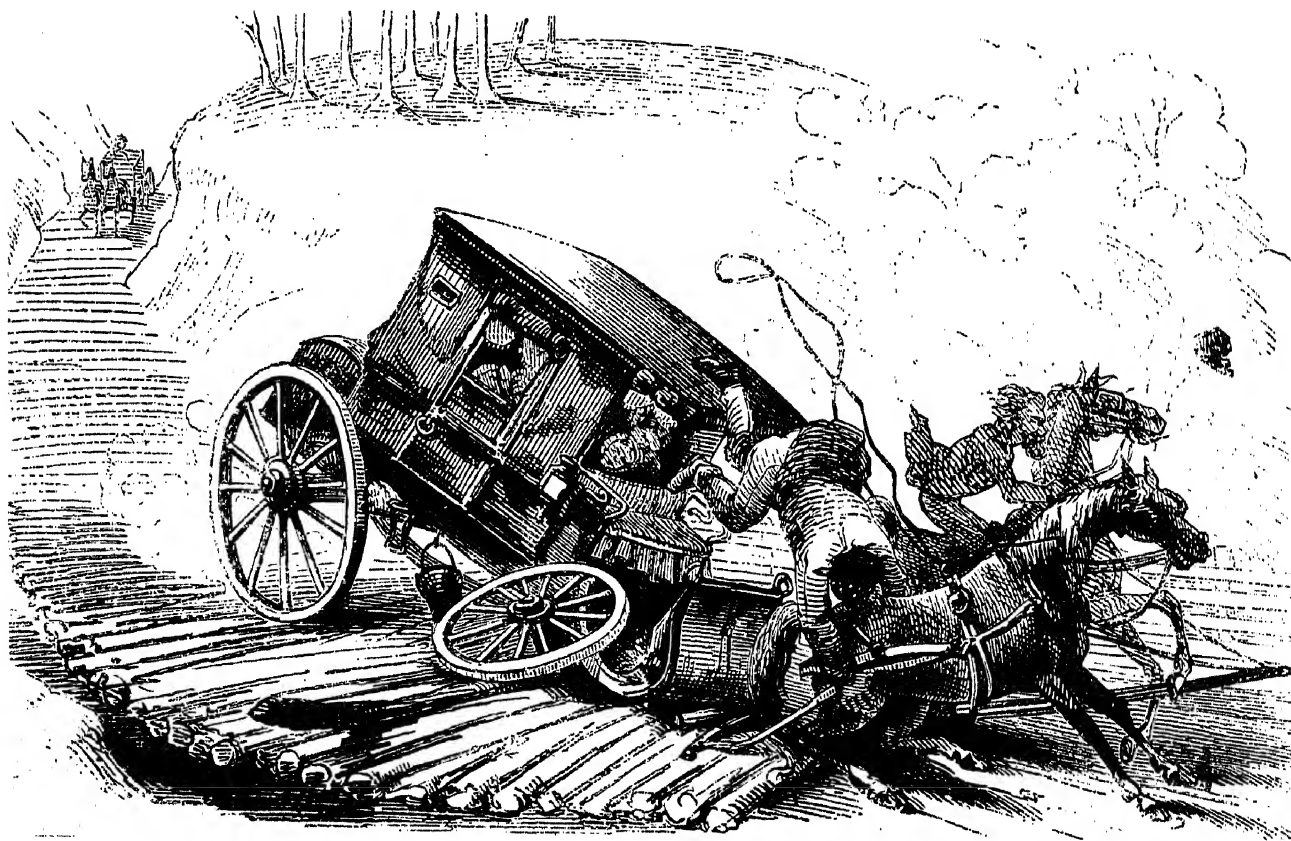
From "Harper's New Monthly Magazine," October 1874

In their pre-railroad days, the Plains were pictured as both idyllic and fearsome. The drawing above pictures the dream, in the 1850's, that wagons always rolled west through sylvan glades in an atmosphere of domestic ecstasy and the songs of approving birds. The picture at the bottom of the page opposite represents the idea of a hunter's paradise, with Scott's Bluff, Nebraska, floating in the distance like a castle in Spain. More realistic is the drawing at the top of the opposite page, representing the 10,000 oxen which were said to have frozen to death in the winter of 1866-1867 on three emigrant routes.

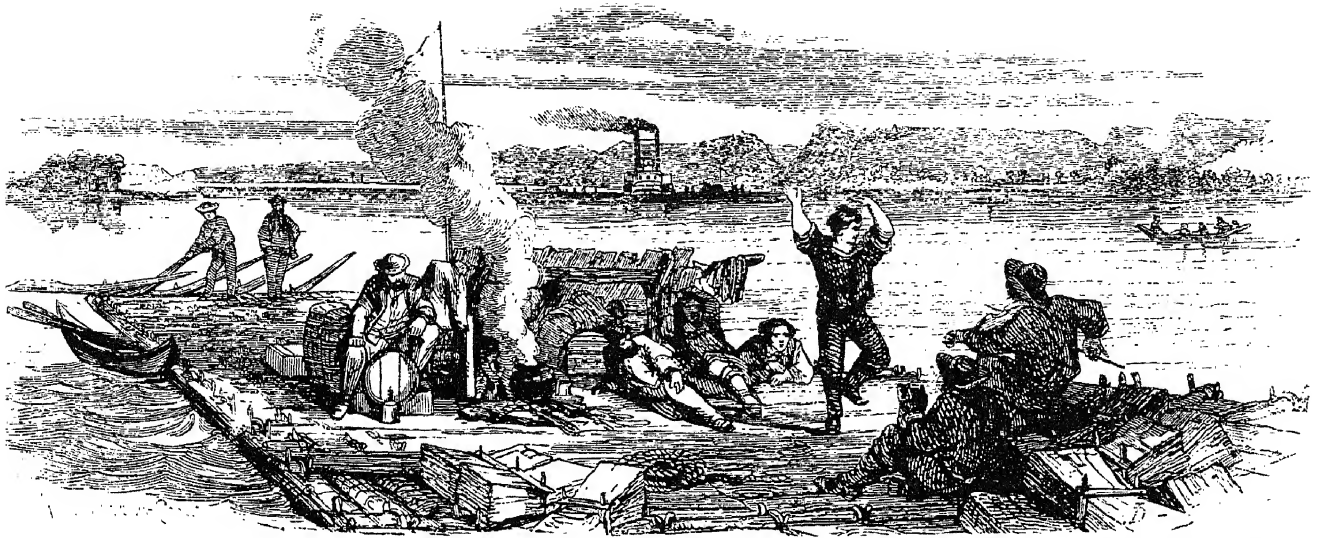


From "The Undeveloped West," by J. H. Beadle, Philadelphia, 1873

"Western travel is rough on women and oxen" was a proverb among experienced emigrants. When one wagon in a train mired down in the prairie mud, ox teams from other wagons helped extricate it, as in the scene above, illustrating travel between Fort Dodge and Sioux City in 1868. Corduroy roads, made of poles, might overcome the mud for short distances in more settled regions, but they carried their own hazards, as shown below.

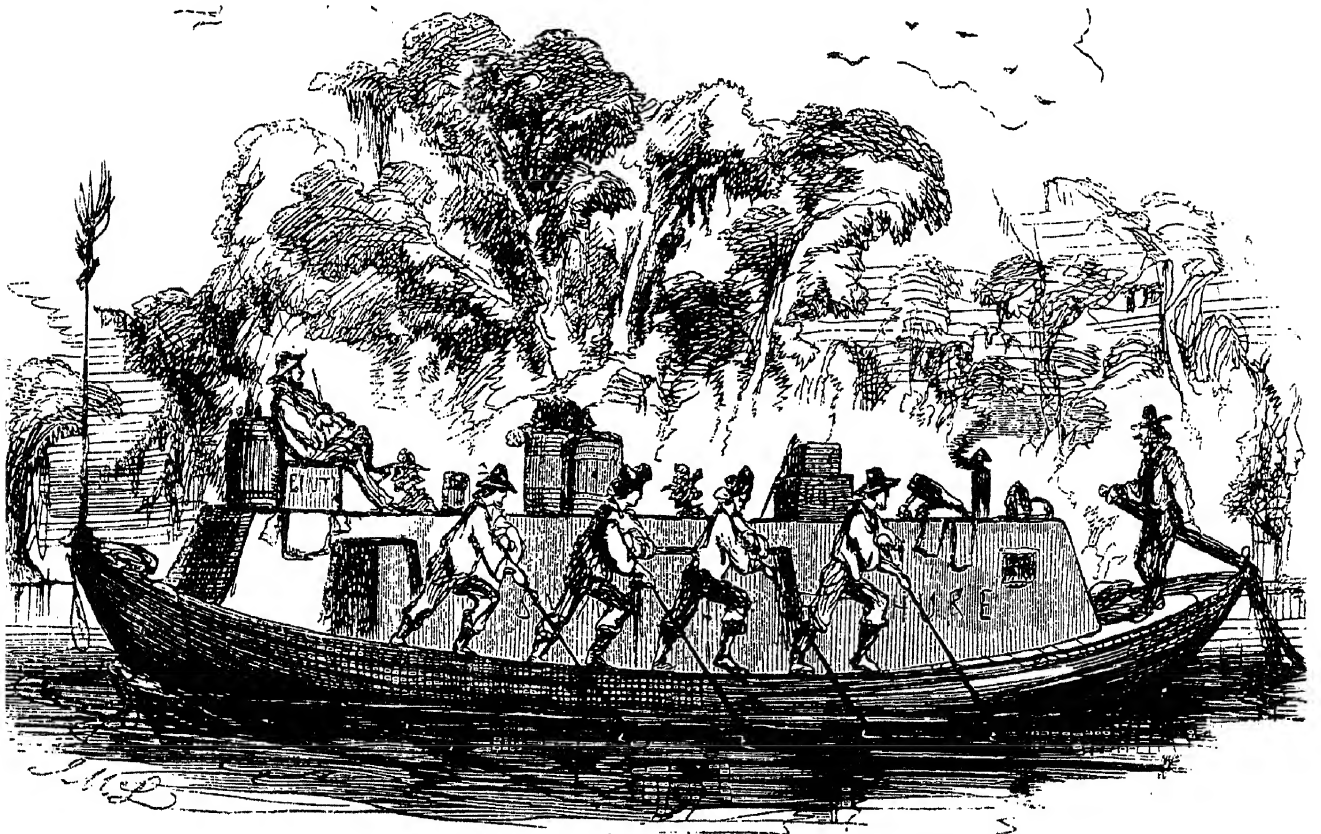


From "Harper's New Monthly Magazine," January 1856

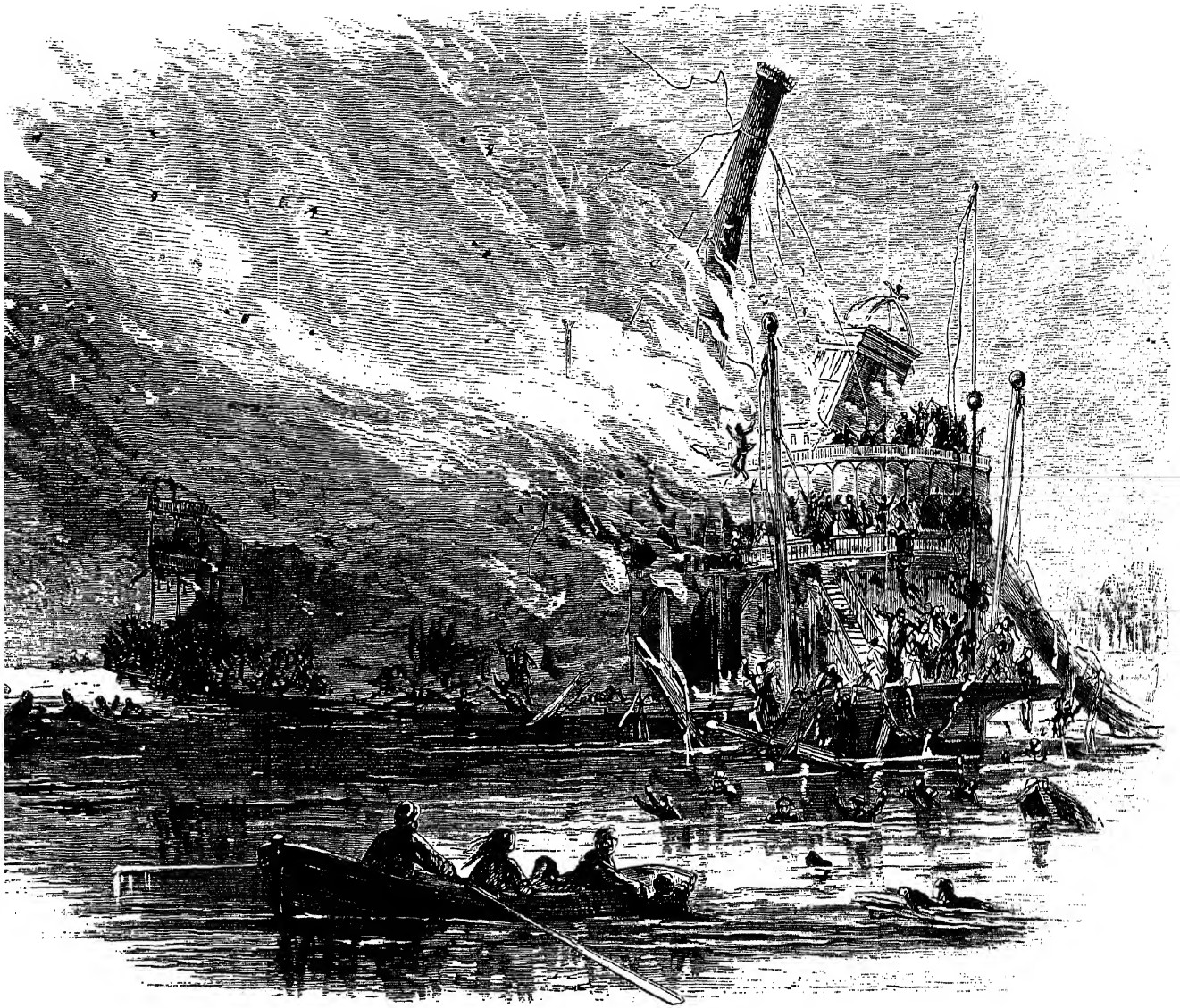


From "Harper's New Monthly Magazine," March 1858

To prospective emigrants "back East" there came optimistic impressions of water transportation in the West — jolly flatboatmen sending their songs drifting up to sighing maidens on bluffs, gay, reckless life on timber rafts (*above*) and fiddles pacing the measured tread of keelboatmen (*below*) along "the walking board" as they pushed their craft — and magnificently voiced Negro deck hands drenching the moonlit decks of romantic steamboats with song as the Mississippi nights floated by. Yet bitter experience taught that rafting was expensive, the raft had to be abandoned or sold at buyers' prices at the end of the journey and a keelboat took eight to twenty powerful men to bring it back upstream. Water travel was slow, uncertain and dangerous.



From "Harper's New Monthly Magazine," December 1855

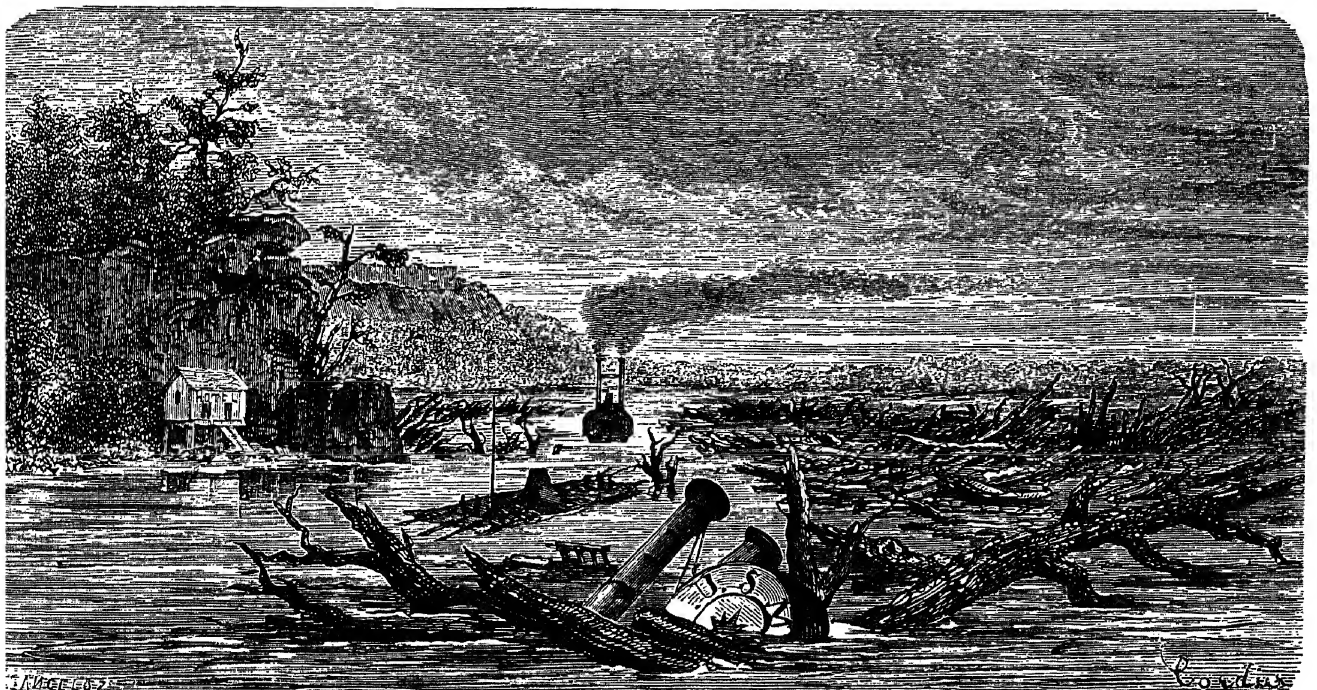


From "Harper's Weekly," April 4, 1868

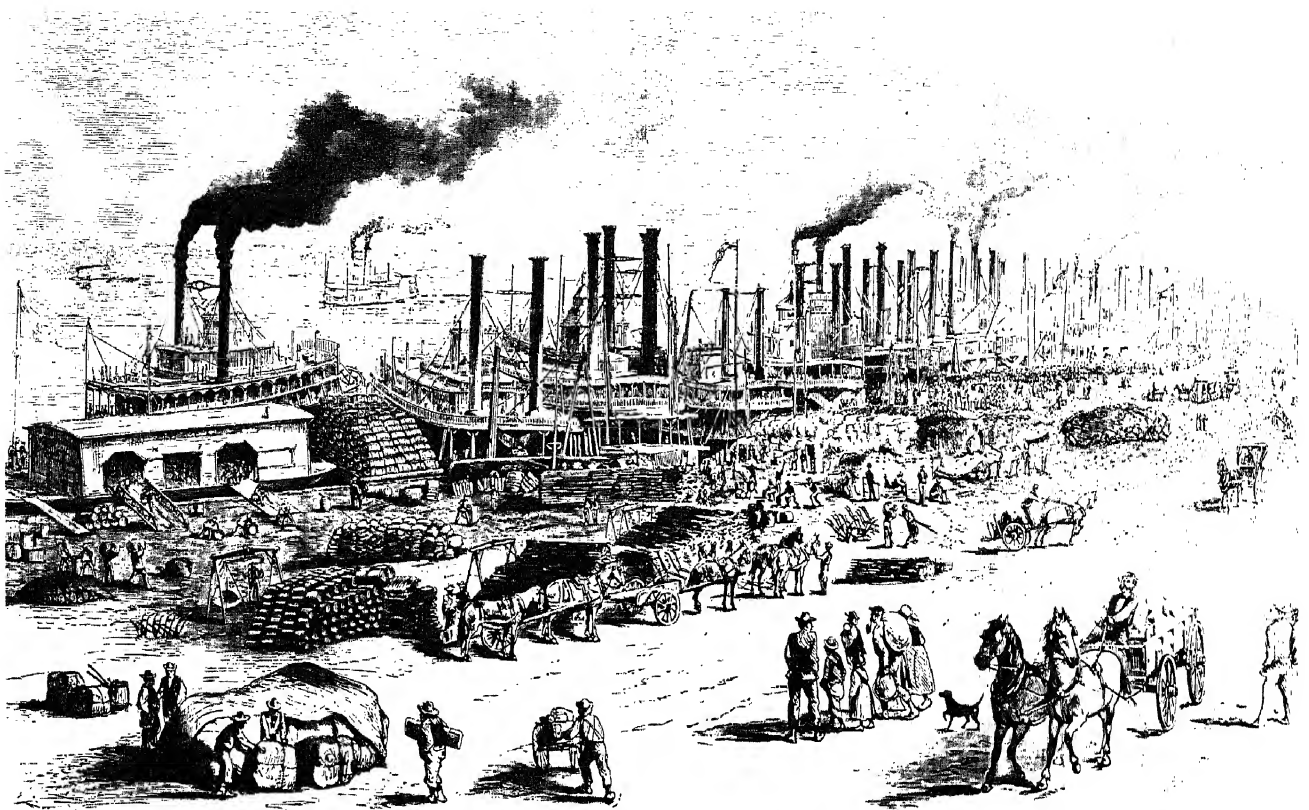
Although steamboats could haul freight for one seventh of the charge levied by keelboats and do it much faster, many shippers clung to the slower transportation because it was so much safer. Steamers were forever impaling themselves on snags (*opposite page*) or bursting their boilers and burning to the water's edge (*above*). Insurance on them cost 12 to 15 per cent in the 1840's with underwriters often refusing to issue policies at all. Between 1817 and 1849 explosions destroyed 233 steamboats in the Mississippi and its tributaries, at a cost of \$3,000,000 worth of property and 2500 lives. Of 36 steamboats lost in these waters during 1846 explosions accounted for 10 and snags for 26, while 66 others were damaged — at a total loss in lives for all the wrecks of 166. That same year 90 wrecks were counted lying in the Mississippi between the mouths of the Missouri and Ohio rivers. Some years winter ice closed navigation on the Upper Mississippi for four months and summer drought for three. Frequently the varying height of the water made landing uncomfortable at way stops (*opposite page*) and thus added to the general dissatisfaction with water travel and to the demand for the more dependable railroad.



From "Harper's New Monthly Magazine," December 1855



From "Amerika in Wort und Bild," by F. A. H. von Hellwald, II, Leipzig, [1885]



From Seymour Dunbar Collection, Museum of Science and Industry, Chicago

The allure of steamboat life was great in such pictures as that above, showing the levee at St. Louis, but it was less in scenes of ice gorges, like that below, which ground \$500,000 worth of steamboats to pieces above St. Louis early in 1872.



From "Frank Leslie's Illustrated Newspaper," March 16, 1872

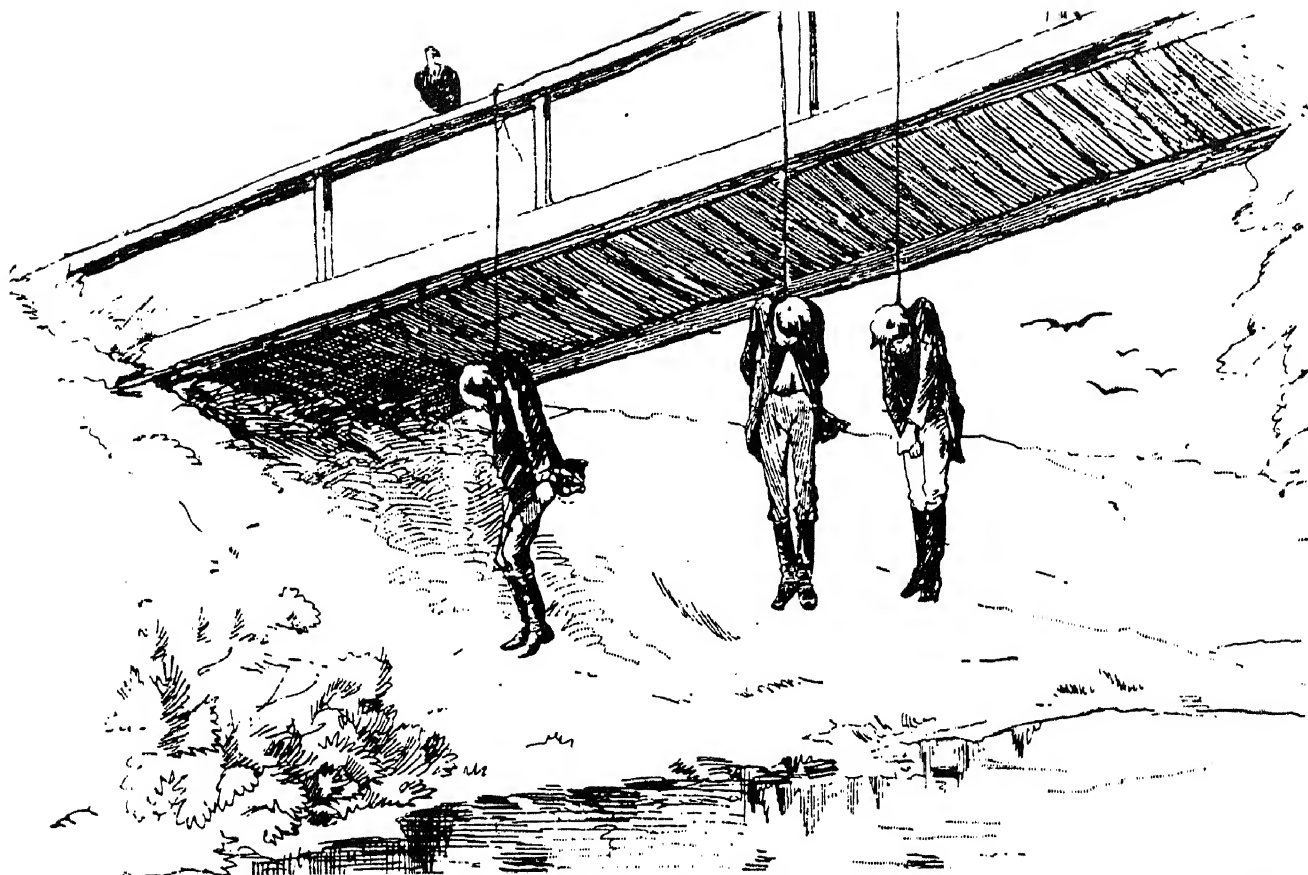


From "Harper's Weekly," August 13, 1859

Pilgrims in the "gold rush" to Pikes Peak in 1859 (*above*) had hope to sustain them as they struggled to get their wagons across such rivers as the Platte, but the vast majority eventually crept back to their farms east of the Mississippi (*below*), oppressed by hunger, weariness and disillusionment.

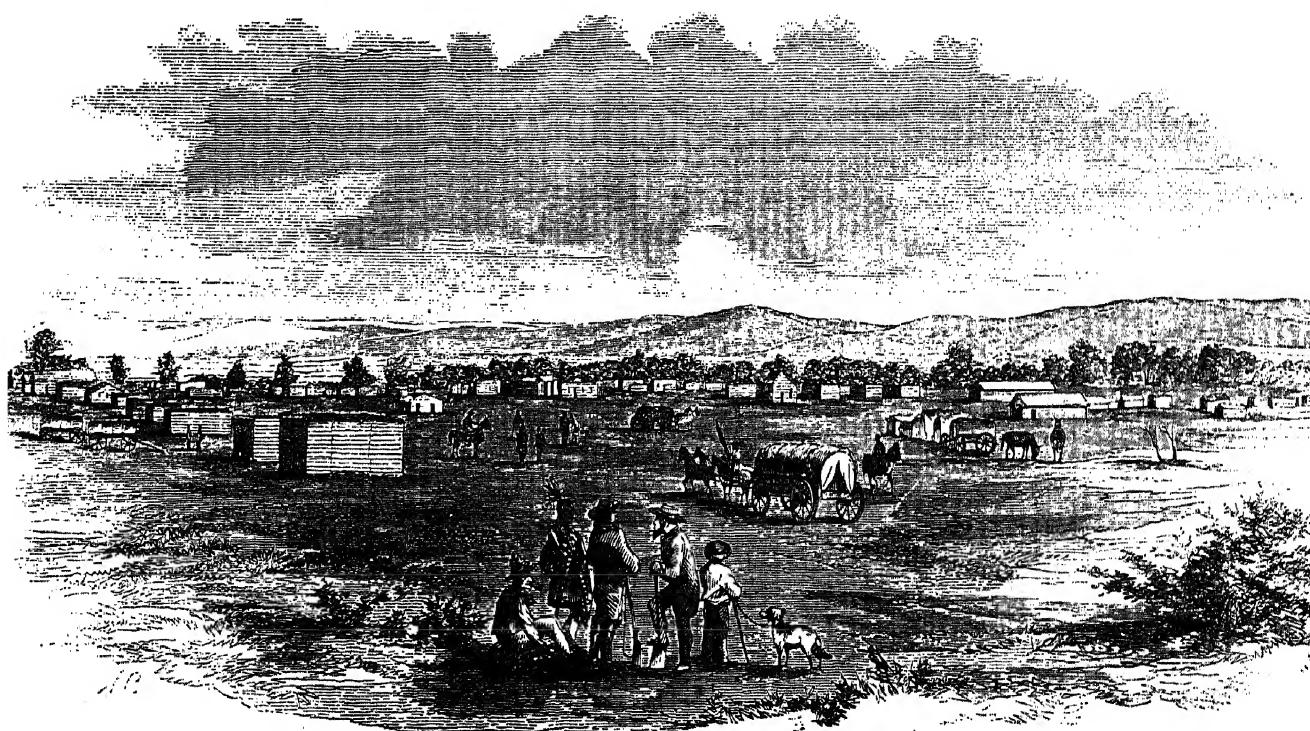


From "Harper's Weekly," August 13, 1859

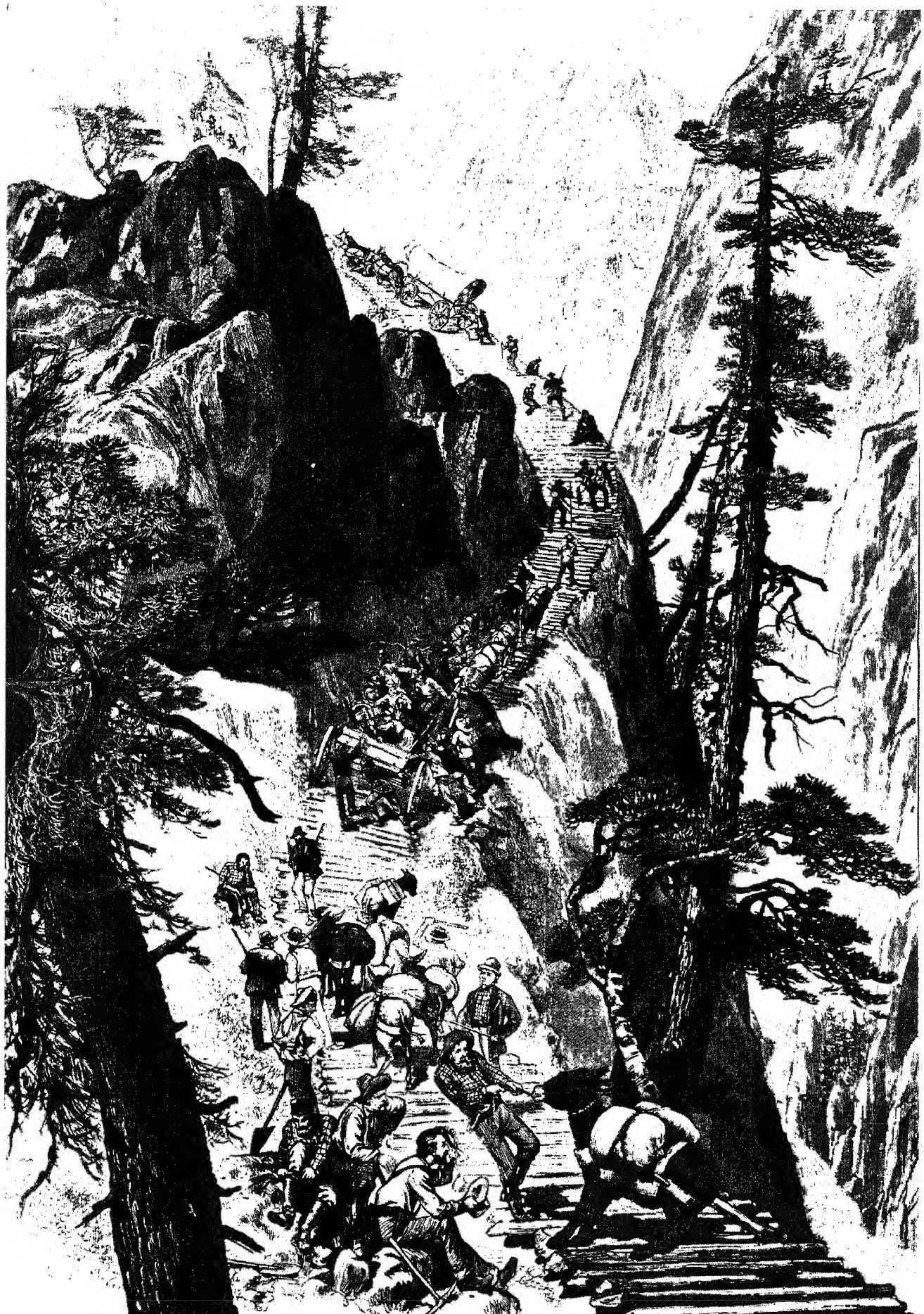


From "Fifty Years on the Trail," by J. Y. Nelson, New York, 1889

"It was a common thing to find four or five swinging of a morning" when the Vigilance Committees worked in the late 1850's to free primitive Denver from "bad men." Mineral discoveries increased the town from a hamlet to a size of 10,000 between 1859 and 1879, and made it the gateway to Leadville beyond.

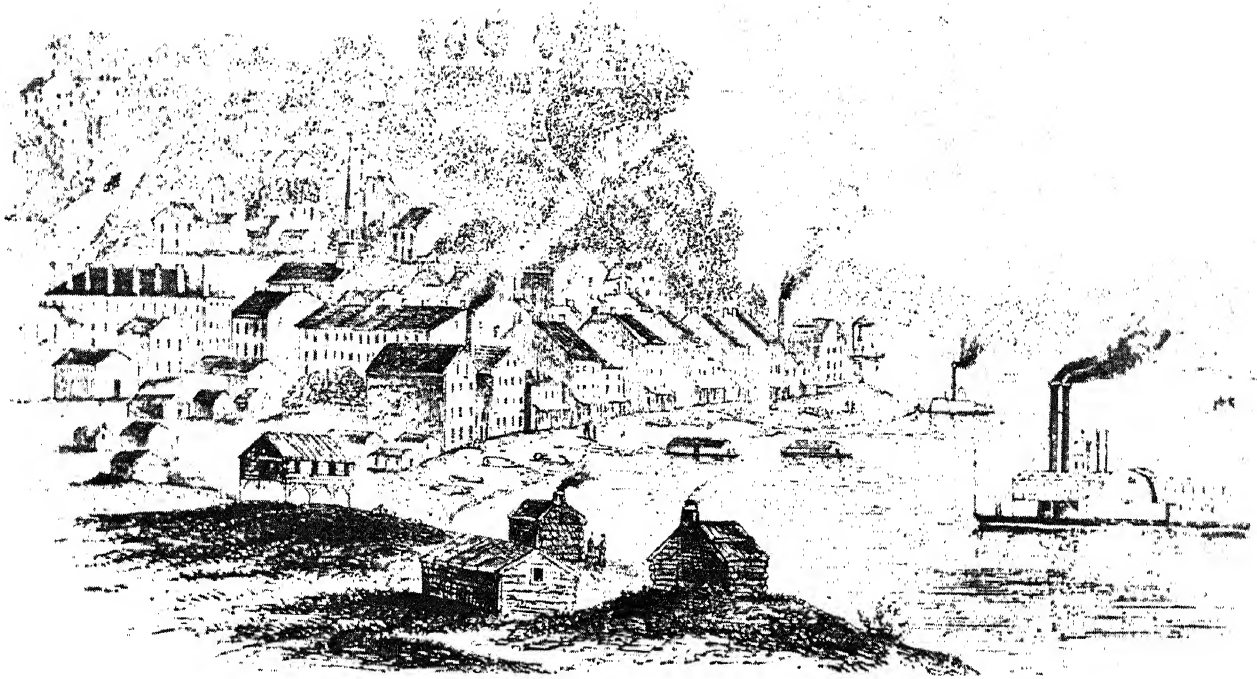


From "Frank Leslie's Illustrated Newspaper," August 20, 1859



Courtesy the Bettmann Archive. From "Frank Leslie's Illustrated Newspaper," May 24, 1879

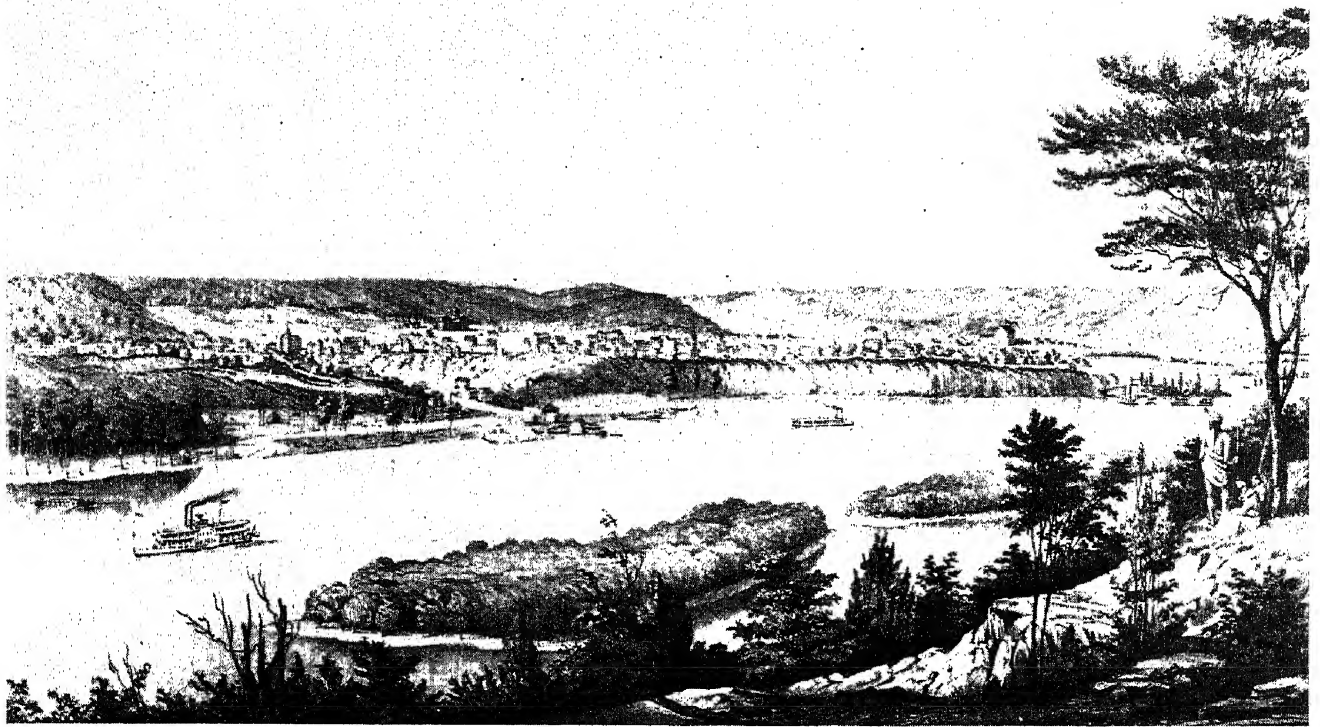
"Emigrants climbing the perilous and difficult corduroy road over the mountains, 13,000 feet above the sea level, into Leadville."



Courtesy Chicago Historical Society

By the mid-1850's the railroads had reached the Mississippi River and were feeding and being fed by the steamboats and barges. The Chicago, Burlington & Quincy had established its outlet at East Burlington, Illinois, by 1855 and was ferrying freight and passengers back and forth to Burlington, Iowa, immediately opposite. Burlington (*above*), which had been settled at the end of the Black Hawk War, had 8000 inhabitants in 1854, two plow factories, one carriage works, a planing mill, and counted 600 steamboat arrivals in twelve months. Iowa, behind it, had counted 192,000 inhabitants in 1850, mainly in sections close to water transport. Still beyond was Nebraska, into which Iowans rushed when it was opened as a Territory in 1854. Missourians, a few of them with slaves, were close behind and a little later Nebraska City (*opposite page*), a log settlement on the Missouri River, was involved in the antislavery war that agitated Kansas just below. Through it, going north, passed John Brown of Osawatomie smuggling Missouri slaves by way of Kansas and Iowa to freedom, and, going south, armed Free-Soil emigrants heading for the gun play of "Bleeding Kansas." In 1858-1859 Nebraska City was the northernmost supply depot for the famous freighting firm of Russell, Majors & Waddell on the Santa Fe Trail and for a huge section of the Pikes Peak migration.

The year 1849 saw Minnesota, like Nebraska, organized as a Territory. Its capital (*opposite page*) was named for the Roman Catholic log church, dedicated to Saint Paul, which had been built on the bluffs in 1841. The Burlington would reach St. Paul in 1886.

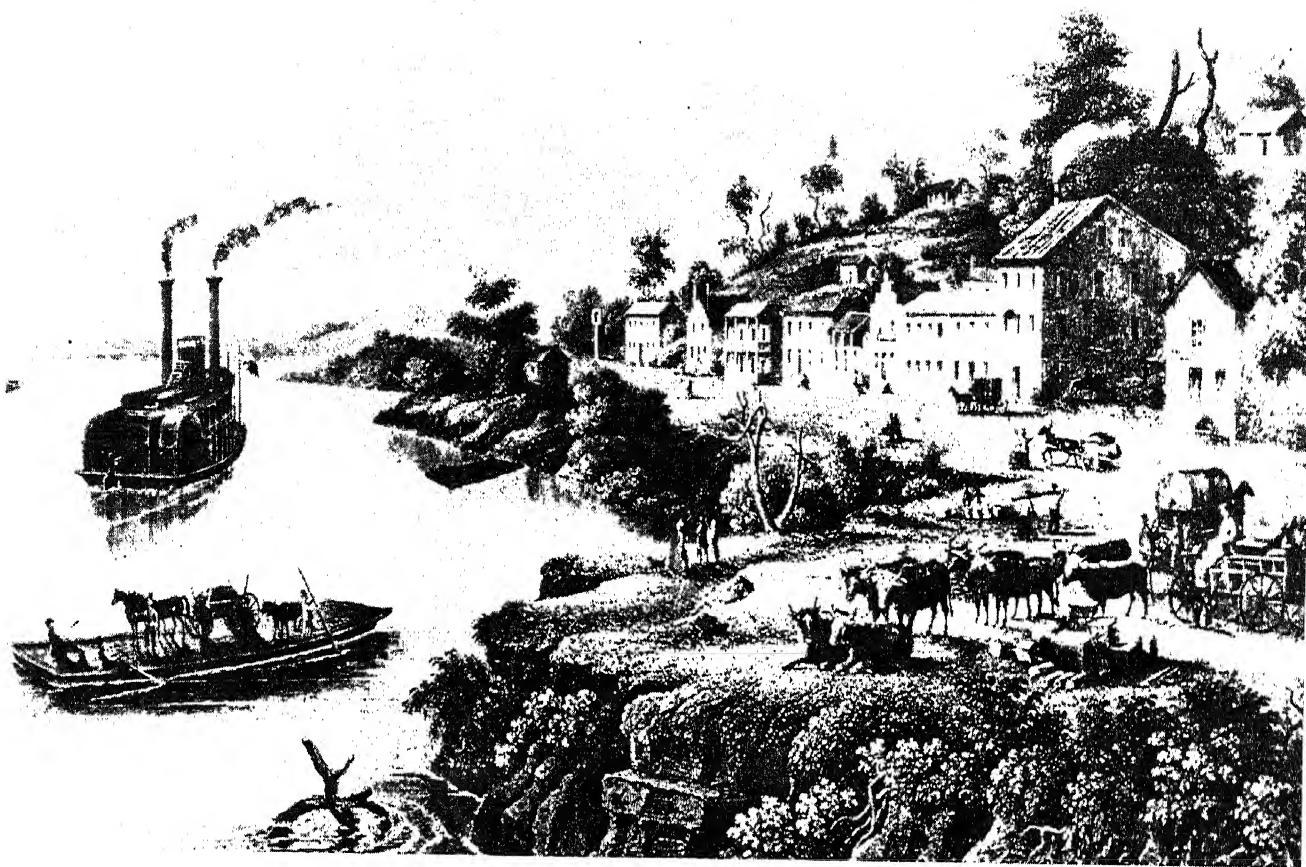


Courtesy the Bettmann Archive

Two primitive towns, St. Paul (*above*) and Nebraska City (*below*), as they looked in the 1850's when they were trading posts in the Indian country. St. Paul, situated below the impassable Falls of St. Anthony, was the head of navigation on "the Father of Waters."

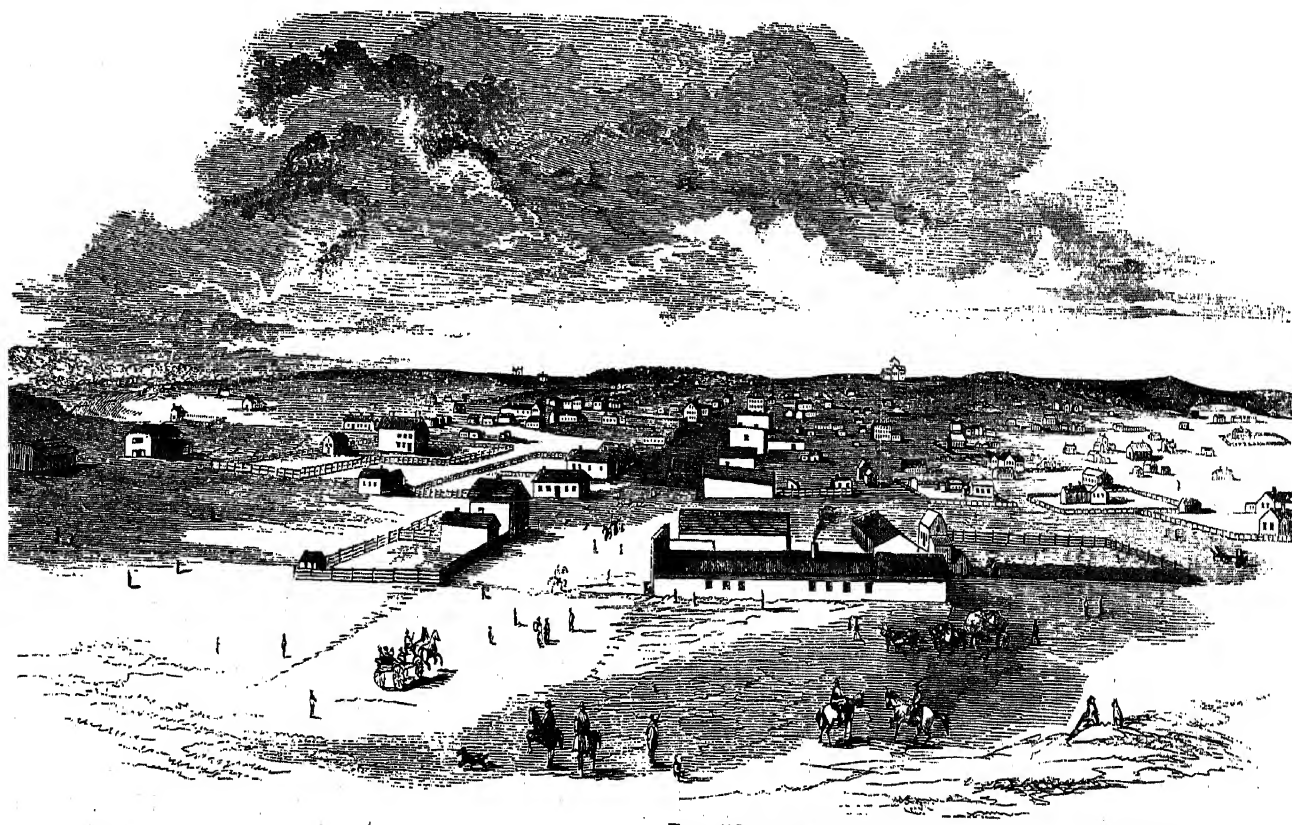


From "Seventy Years on the Frontier," by Alexander Majors, Chicago, 1893



Courtesy Chicago Historical Society

A painter in 1852 saw Kansas City (*above*) as a center for a wide variety of land and water vehicles. A newspaper artist in 1858 saw Omaha (*below*) as having obtained, in the four years since it had been laid out, "a commanding commercial position" with "a fine steam ferry" connecting it with Council Bluffs.

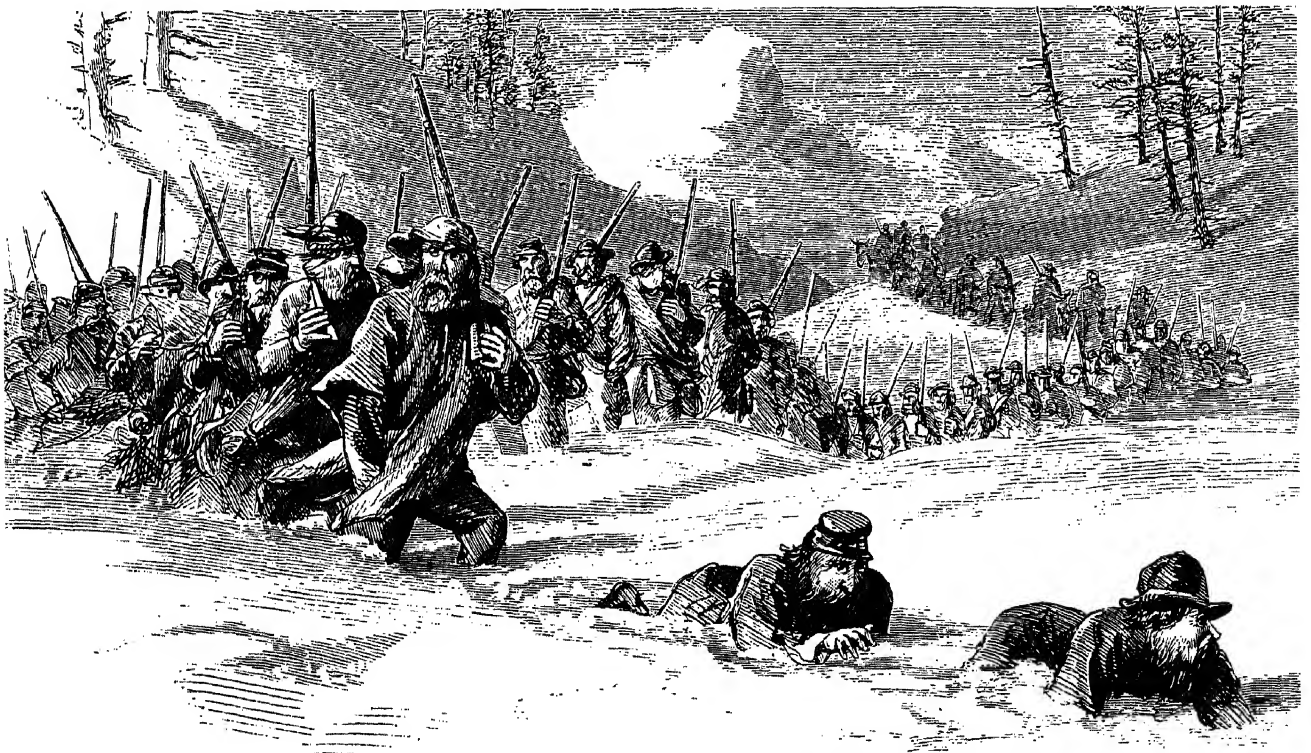


From "Frank Leslie's Illustrated Newspaper," November 6, 1858

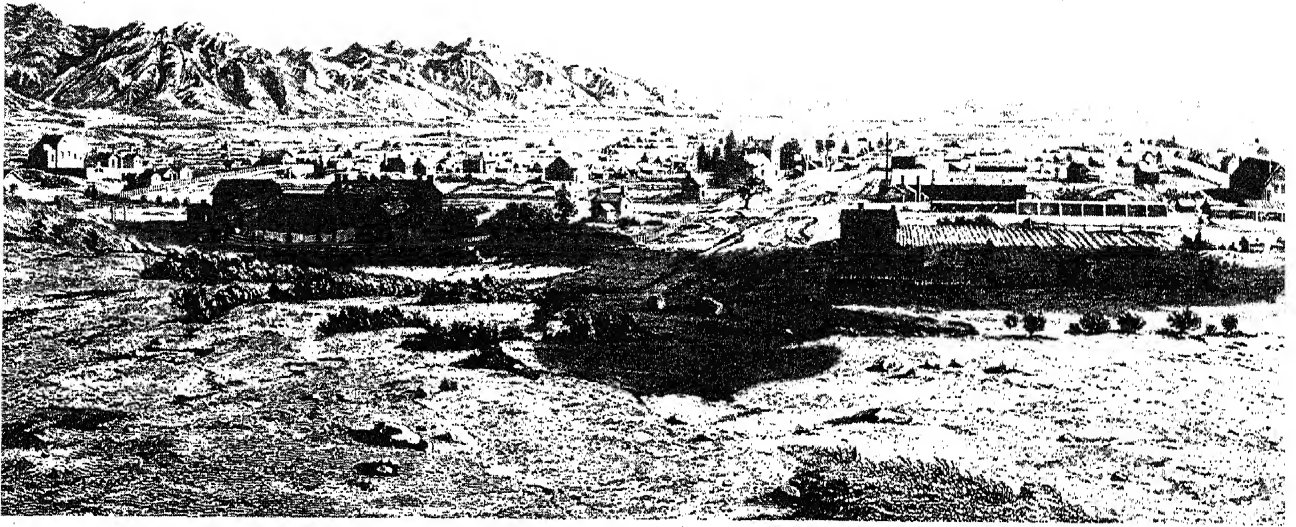


From "The Undeveloped West," by J. H. Beadle, Philadelphia, 1873

The absence of trees on the oceanic expanse of the Plains held back settlement for years. It was not until the railroads could bring in lumber for buildings and fencing, and firewood or coal for fuel, that the areas far from water traffic could be homesteaded. Hunters and overland emigrants could build campfires readily enough with "buffalo chips" (*above*), the sun-dried excrement of the bison. Tales of the deep snows on the Plains also restrained immigration. United States soldiers in Wyoming during the "Mormon troubles" of 1857 marched through fluffy drifts by forcing the men to take turns crawling on hands and knees to make a firmly packed path for the others. "The leading man was generally able to go about 50 yards before he became exhausted."



From "Thirty Years of Army Life on the Border," by R. B. Marcy, New York, 1866



From "Route from Liverpool to Great Salt Lake Valley," by Frederick Piercy, Liverpool, 1855

However savagely the Mormons might be attacked for practicing polygamy, they were in the 1850's educating the nation as to what vigor and intelligence could do in settling the Plains and the Mountains. In 1855 a British traveler saw in Salt Lake City (*above*), with its 15,000 residents, "a spirit and energy that cannot be equalled in any city of any size . . . not a tippling house, not a gambling house or house of ill-fame." And in 1857, only ten years after the Mormons had arrived, a New York artist found (*below*) fashion and culture at a ball in the city's theater.



From "Harper's Weekly," October 10, 1857

CHAPTER TWO. FORBES BEGINS THE BURLINGTON

THE citizens of the little prairie town of Aurora, Illinois, in 1849 wanted a railroad to Chicago. They knew, as did many another Midwesterner, what a railroad would bring: an end to muddy roads, easy access to Eastern markets, a means of getting the manufactured goods they lacked, a tie-in with the civilized and going world.

For Aurora the solution was not too difficult. Leading citizens put a charter through the State Legislature authorizing them to build the "Aurora Branch Railroad" twelve miles to Turner Junction, where they could meet and run over the rails of the new Galena and Chicago Union Railroad that had begun operations the preceding October. Money was subscribed; the twelve miles of road were built in 1850. Building railroads, even then, was expensive; those twelve miles cost \$125,868.77, and Aurora all told numbered 1200 souls.

If Aurora was to become a station on any through route, especially one joining the Great Lakes to the Mississippi River, more capital than the Aurora citizens could command must be found. It came through the foresight and activity of one of the two men who, within the next fifty years, were to transform these twelve miles of track into a great railroad system. John Murray Forbes of Boston had made money in the Oriental shipping trade. In the mid-1840's a couple of Detroiters, J. F. Joy and J. M. Brooks, sketching for him the excitement and the possibilities in Western railroading, persuaded him to raise funds to buy from the State of Michigan the semi-moribund Michigan Central Railroad, and to complete it — first to Lake Michigan, and then to Chicago. Having embarked on this venture and having beaten a rival, the Michigan Southern, into Chicago by one day — this was in 1852 — Forbes perforce had to think of finding a road westward to the Mississippi, since the rival already was building the Chicago & Rock Island in that direction. Casting about for a course, he lighted first upon the fairly prosperous and ambitious little Aurora Branch. "It runs through a fertile and easy country to build," he wrote, "and has no expensive ends, as it runs over the Galena to Chicago and has a very favorable contract for thirty years." Citizens were willing, Forbes found Boston investors to advance funds, and control passed into the hands of Eastern capital. The charter was altered to permit construction westward to Mendota, and the name of the road changed to the Chicago and Aurora Railroad.

That same year Forbes and his Eastern investors acquired a controlling interest

in three other Illinois roads that needed funds to complete their building plans: the Central Military Tract Railroad from Galesburg to Mendota, the Peoria and Oquawka ("Phoebus, what a name!" exclaimed Forbes) and the Northern Cross from Galesburg to Quincy. In 1855 the Chicago and Aurora changed its name to the Chicago, Burlington & Quincy Railroad.

Even before the fulfillment of one of his aims, the extension of the road to the Mississippi, striking the river both above and below the rapids at Keokuk, Forbes had been interested in another struggling little railroad, which had been launched as early as 1847 by the citizens of northern Missouri, the Hannibal and St. Joseph, the first road to connect the Mississippi with the Missouri. Through his activity money was found for its completion in 1859, and although the Hannibal and St. Joseph did not formally pass under Burlington management until 1883, it was run during most of these intervening years under much the same board of directors as the Burlington, with Forbes always a figure of weight.

Still again, Forbes, one of those voracious but canny builders who made the West, persuaded the Burlington stockholders in 1857 to buy the control of another unstable little railroad, the Burlington and Missouri River, which, founded in 1852, had managed to advance a few miles west from the Mississippi. In 1856, however, with a land grant from the federal government as inducement, it could look for buyers. "I had vowed to touch nothing new," wrote Forbes, "but the Iowa Road with its rich and populous country and its 300,000 acres of *Free Soil* seems to me so very important an extension of our lines that I can't help taking rather more than my share there."

The outlines of the Burlington System, therefore, had been laid by Forbes before the Civil War. That the Burlington and Missouri River Railroad should eventually reach the Missouri, as it did within a few years after the war, was a foregone conclusion when he took over its direction.

When the war broke out, Forbes dropped all business interests to devote himself, in every way a private citizen could, to the Union cause. He organized Union League Clubs, helped the Governor of Massachusetts with the formation of a military establishment, took a leading part in raising Negro regiments, gave to the local Sanitary Commission the incentive and direction it needed to be successful, and was frequently called in to give advice to the Navy and Treasury Departments. In 1863 — the only occasion on which he served as a government representative — he was sent to England to try to prevent the departure of the ironclad "raiders" which British shipyards were building for the Confederacy.

Forbes was one of the appealing but little-known men of the second half of the century, intensely interested in politics but always shunning publicity, a great traveler and a delightful host. Emerson paid glowing tribute to him: "Mr. Forbes at Naushon is the only 'Squire' in Massachusetts, and no nobleman ever under-



stood or performed his duties better. I divided my admiration between the landscape of Naushon and him. He is an American to be proud of. Never was such force, good meaning, good sense, good action, combined with such domestic lovely behaviour, and such modesty and persistent preference of others. Wherever he moves, he is the benefactor. It is of course that he should shoot well, ride well, sail well, administer railroads well, carve well, keep house well, but he was the best talker also in the company, — with the perpetual practical wisdom, seeing always the *working* of the thing, — with the multitude and distinction of his facts (and one detects continually that he has had a hand in everything that has been done), and in the temperance with which he parries all offence, and opens the eyes of his interlocutor without contradicting him. I have been proud of many of my countrymen, but I think this is a good country that can breed such a creature as John M. Forbes. . . . I came away from Naushon saying to myself of John Forbes, how little this man suspects, with his sympathy for men, and his respect for lettered and scientific people, that he is not likely ever to meet a man superior to himself!"

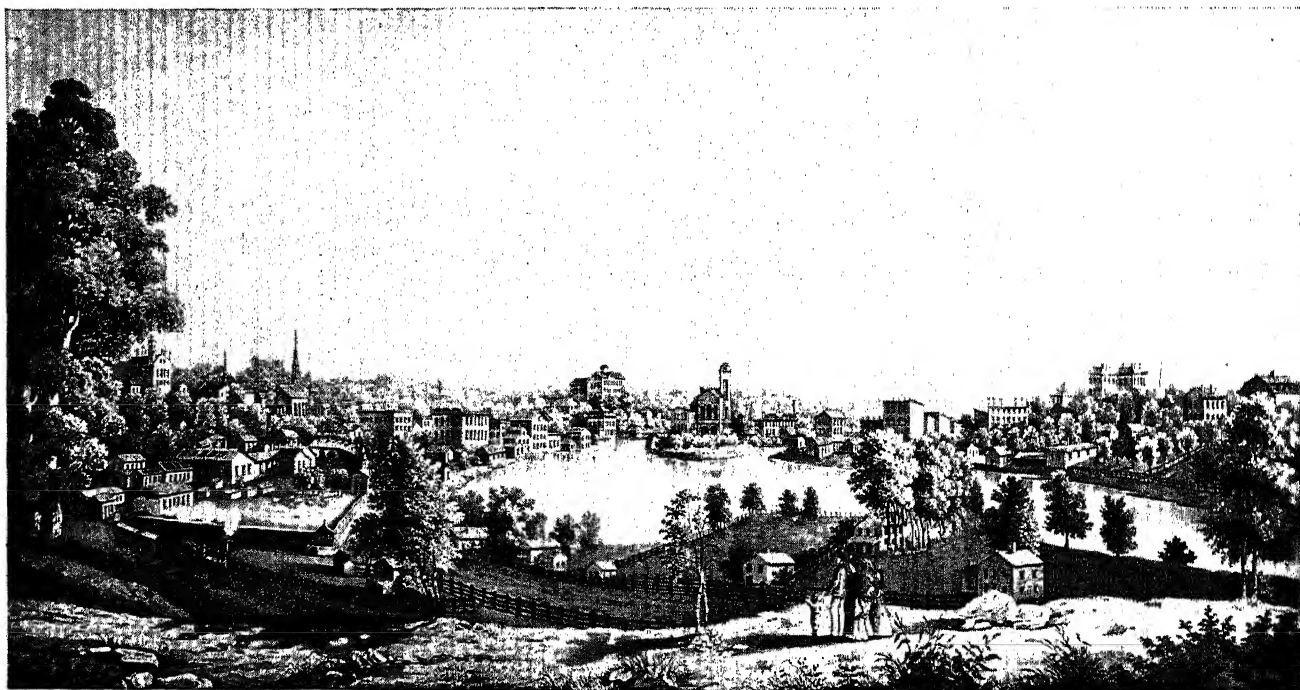
Among the many able young men Forbes chose for his Western railroads was Charles E. Perkins, the other remarkable executive who helped build the Burlington into a great system. Perkins, who, when first asked to come to the Burlington, did not know what the initials B & M R stood for, began work on the Burlington and Missouri River Railroad in 1859, at a salary of \$30 a month.

Forbes was a director of the road from 1856 to his death in 1898. The informal picture was taken about 1882, when he was seventy years of age.



Early in 1849 Lorenzo D. Brady (*left*), a thirty-nine-year-old merchant who represented Kendall County at Springfield, pushed through the Illinois State Legislature, on behalf of the citizens of Aurora, a bill authorizing the chartering of the twelve-mile railroad to Turner Junction, now a part of West Chicago. The little town was far from being as romantically neat as in the conventionalized print below, which does nevertheless show the railroad, and beside it the repair shops and roundhouse. In modern form they exist still as one of Aurora's chief industries.

The schedule (*opposite page*) for a single-track road running six trains daily may seem simple, but it is the grandfather of a modern timetable, and the rules for safe operation, some of them still recognizable, are the beginnings of the highly complicated procedure of today. A modern Zephyr today makes the run from Chicago to Mendota in an hour and a quarter.



Courtesy Chicago Historical Society

CHICAGO & AURORA RAIL ROAD.

TIME CARD NO. 4.

FOR THE GOVERNMENT AND INFORMATION OF EMPLOYEES ONLY.

To take effect on and after Monday, August 14th, 1854.

TRAINS WESTWARD.

TRAINS EASTWARD.

Freight Train.	Express Mail.	Passenger.	Miles		Miles	Passenger.	Freight.	Express Mail.
5.45 Leave A. M.	8.55 Leave A. M.	4.15 Leave P. M.		Chicago...	104	10.30 Arrive.	4.35 Arrive.	9.00 Arrive.
5.58		4.20 Meet Fr't.	2	Canal Street...	102		4.20 Mt. Past & DP	
6.22	9.15	4.30	8	City Limits...	96	10.12	3.55 Meet B. P.	8.40
6.38	9.32	4.47	16	Oak Ridge...	88	9.54	3.18	8.22
7.17	9.42 Meet Pass.	4.57	20	Cottage Hill...	84	9.42 Meet Pass.	2.58	8.12
7.30	9.50 Meet B. P.	5.03	23	Babcock's Grove	81		2.42	8.05
7.44 Meet D. P.	9.55	5.09	25	Danby...	79	9.30	2.30 Meet R. Fr't.	7.58
7.57	10.00	5.15	27	Wheaton...	77	9.24 Meet G Pass.	2.20	7.52
8.11	10.05	5.20 Meet B Pass.	30	Winfield...	74	9.13	2.10	7.45
8.55 Meet Pass.	10.30	5.35	36	Junction...	70	8.55 Meet Fr't.	1.15	7.25
9.45	11.00	6.00	43	Batavia...	61	8.40	12.30	7.00
	11.01	6.05		Aurora...	58	8.35		6.50
9.55	11.08	6.10	46	West Aurora...	51	8.30	12.00	6.48
10.05	11.12	6.15	48	Montgomery...	56	8.25	11.40	6.40
10.25	11.20 Meet Freight	6.30 Meet Pass.	51	Oswego...	63	8.15	11.20 Meet Pass.	6.30 Meet Pass.
10.50 Meet Fr't	11.40	6.50	57	Bristol...	47	8.00	10.50 Meet Fr't.	6.15
11.15	11.53	7.00	62	Plano...	42	7.45	10.15	6.00
11.40	12.05 P. M.	7.12	65	Newark...	39	7.35	9.45	5.50
12.30 P.M. mt pas.	12.30 Pass Fr't.	7.32	71	Somonauk...	33	7.20	9.05	5.30
1.20	12.50	7.50	78	Waverly...	26	7.00	8.15	5.10
2.20	1.10	8.20	89	Earl...	15	6.35	7.15	4.45
3.50 Arrive	2.00 Arrive.	9.00 Arrive.	104	Mendota...			6.00 A. M. leave.	4.00 P. M. leave.
				La Salle...		5.30 A. M. leave.		

Trains meet and pass at Stations marked by FULL FACE FIGURES.

SIGNALS.

1. A Red Flag by day, or Red Lantern by night, upon an Engine, indicates that another Engine is to follow it, out of the regular train, and must be waited for as a regular passenger train.
2. A Red Flag by day, or a Lantern by night, waved upon the track, signifies that a train must come to a full stop.
3. A Stationary Red Flag signifies that the track is not in perfect order and must be run over with great caution.
4. A Red Signal Light must be exhibited on the rear car of each train in the night time, until the train arrives at its destination.
5. One Puff of the steam Whistle is the signal to Brake. Two Puffs of the Steam Whistle is the signal to Loose the Brakes. And three Puffs is the signal to Back.
6. One stroke of the Bell, Stop. Two Strokes of the Bell, Go Ahead. And three strokes of the Bell, Back.

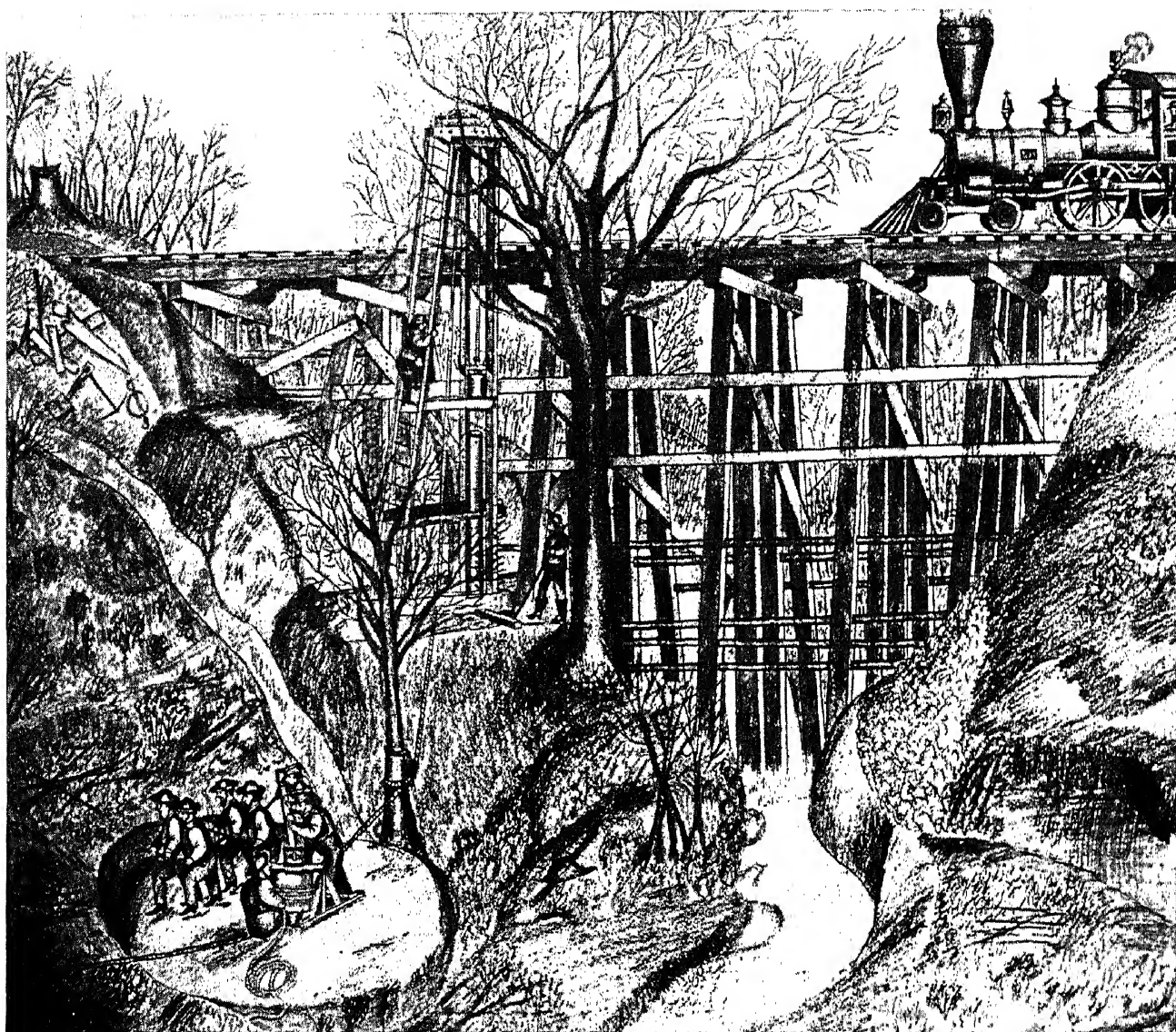
RULES FOR RUNNING TRAINS.

1. No Train will, under any circumstances, leave a Station before its time specified in time table as regulated by the standard time at the Chicago Ticket office.
2. Trains moving West have the right to the Road over trains of same class moving East, after waiting five minutes beyond their own time at passing Stations and will leave each succeeding Station five minutes behind their regular time until the approaching train is passed.
3. Freight Trains will keep ten minutes out of the way of Passenger Trains.
4. Gravel and Construction Trains will in all cases keep ten minutes out of the way of Passenger and Freight Trains.
5. Any Train following a Passenger Train will proceed with great care, keeping at least one mile in the rear of it.
6. Trains moving East will have the right to the road over Trains of same class, after waiting thirty-five minutes at passing Station, and will leave each succeeding Station thirty-five minutes behind its regular time, until the delayed Train is passed; five minutes of the above time must be allowed for safety, and not to be used by either Train. This rule will apply only to Trains upon the C. & A. R.R.
7. The Conductor will have entire charge and control of the Train and all persons employed upon it, and is responsible for its movements while on the Road; he will be at the station twenty minutes before the time designated to leave; will allow no one to stand on the platform of the Cars while in motion, except the Brakeman.
8. Engineers on approaching a Station or Road Crossing will sound the Whistle and ring the Bell at least 80 rods before crossing any road. Pass Stations and switches cautiously, and at a rate of speed not exceeding 12 miles per hour.
9. Engineers will allow no person to ride on their Engines, except permission is given by the Superintendent, Master Mechanic, or Road Master.
10. When two or more Engines are running in company, all but the last one must carry a Red Flag in the day and a Red Light at night; the forward one must not leave a Station until they are all in sight. Trains meeting an Engine with a Red Flag or Light, must wait and pass them all at the same point.
11. No Extra Engine will be allowed to pass over any portion of the road unless following a Regular Train, except by permission of the Superintendent.
12. Trains having occasion to stop on the road will stop where the view is long and clear, keeping signals out in such a position as to guard against the possibility of a collision with other Trains.
13. In any case where there is room for doubt as to the right of the road, or the safety of proceeding from any cause, adopt the safe course, keeping signals far enough in both directions to obviate any danger.
14. In all cases, by night or by day, when repairing the track so as to obstruct or endanger the passing of a Train, a Red Flag or Lantern, as the case may be, must be placed on the track, so as to be seen by any approaching train at least one half mile each way from the place of danger.
15. The Track must be kept clear of all obstructions; no cars allowed to stand on the main track unless in charge of proper persons to see the track is clear at least twenty minutes before a train is due, and nothing allowed to be piled within four feet of the track.
16. Trains while running upon the Galeana and Chicago Union road, will be governed by the running rules of said Company. Particular attention is called to Rule 6.
17. Conductors will collect fare of all Passengers not having a pass from proper authority, unless otherwise ordered by Superintendent.

WALTER S. JOHNSON, Superintendent.

Chicago, August 10, 1854

A railway timetable of 1854.

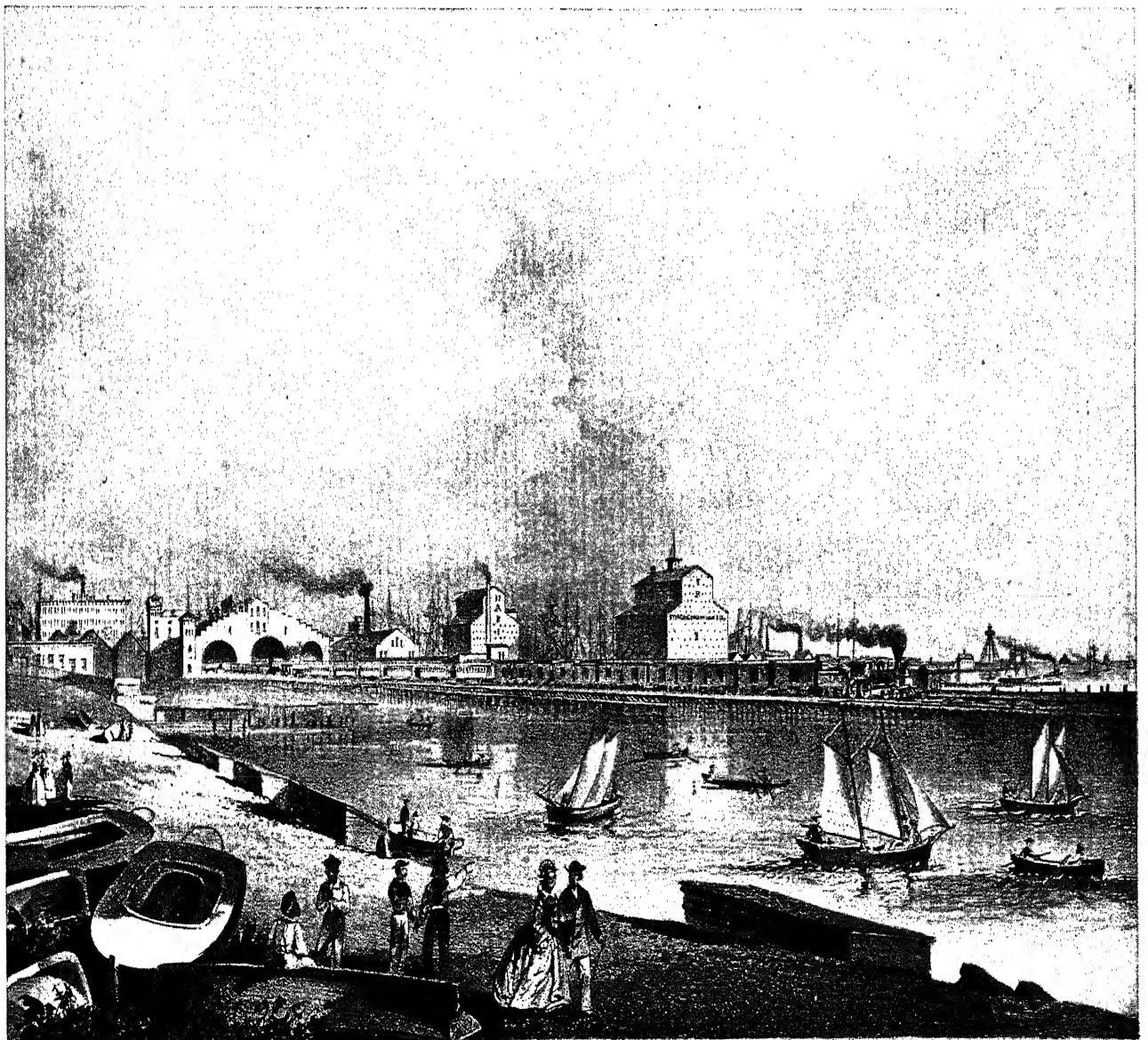
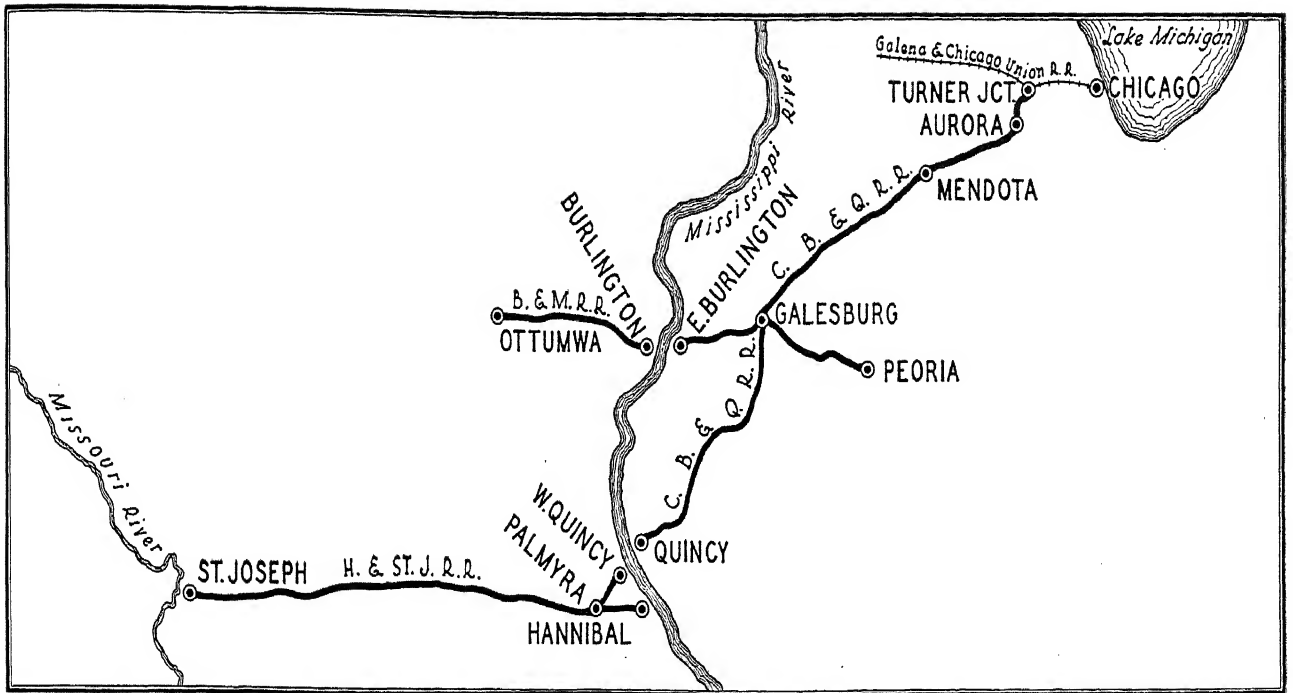


Courtesy Aurora Historical Society

Though the sketch above was made in 1871, near Ottawa on the Fox River branch of the Burlington, both the bridge construction and the method of driving piles represent practices of an earlier period. The engine, of the type built in the 1850's and out of date for main line traffic, could be used on a branch line.

The map opposite, of the Burlington lines and interests after ten years of building and consolidation, shows a system with miles of road stretching from Chicago to the Missouri River and already well started across Iowa.

In 1856 the Burlington made a four-year contract with the Illinois Central, at \$40,000 a year, to use its splendid new station on Water Street in Chicago (*opposite*), the largest of its kind in the United States, with eight tracks laid within the building. Six years before the Aurora Branch had used the station of the Galena and Chicago Union at Canal and Kinzie, and later the Galena's station on Wells Street. The Union Station was not built until 1881 and that site has been used continuously since by the road.



Published by Jevne & Almini

GREAT CENTRAL DEPOT GROUNDS.

With Entrance to Harbor.

Chig. Lith. Co. 152 & 154 Clark St.

From "Chicago Illustrated," by Jevne & Almini [Chicago, 1866-67?]

New Bedford Jan 1st 1857

Vose Livingston & Co

Boston

I received your letter giving price
of iron in due course and would enquire what amount
of duty we shall have to pay & if you deliver the
iron on board Canal boat, also if you have any
iron with a broadened bottom, ie, the part which rests on
the tie ^{or in the chair}, the pattern which you sent is considerably narrower
than the rails which the road has previously used & we
should have to get new chairs.

asked for above, so as to compare
your prices with others more definitely
than I can without it

I want the information
Yours very respectfully
E. L. Baker Chairman

Below is width of the base of the two patterns of rails
we have on the road

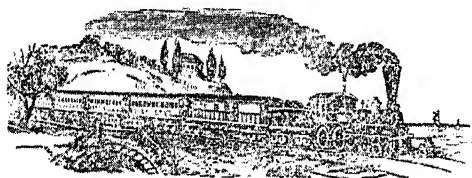


The simplicity of early railroad management is startlingly shown in the above letter, taken from the letter press books of the Burlington in the Newberry Library, from E. L. Baker, Chairman of the Board of Directors, to the supply merchants, Vose, Livingston and Company of Boston. In the panic year 1857, Baker, in placing his order for equipment, often felt compelled to write, "This Road you are perhaps aware is one of the most prosperous roads in the Union [or World]," and to enclose a statement of its earnings: \$113,092 in 1855, \$144,780 in 1856, and \$118,313 in the depression year itself.

New Short Route to the East, North and South,

BY THE

HANNIBAL & ST. JOSEPH



RAIL ROAD.

TO CHICAGO, ST. LOUIS, & POINTS EAST, NORTH & SOUTH

SAVING FROM

5 TO 7 DAYS TEDIOUS NAVIGATION

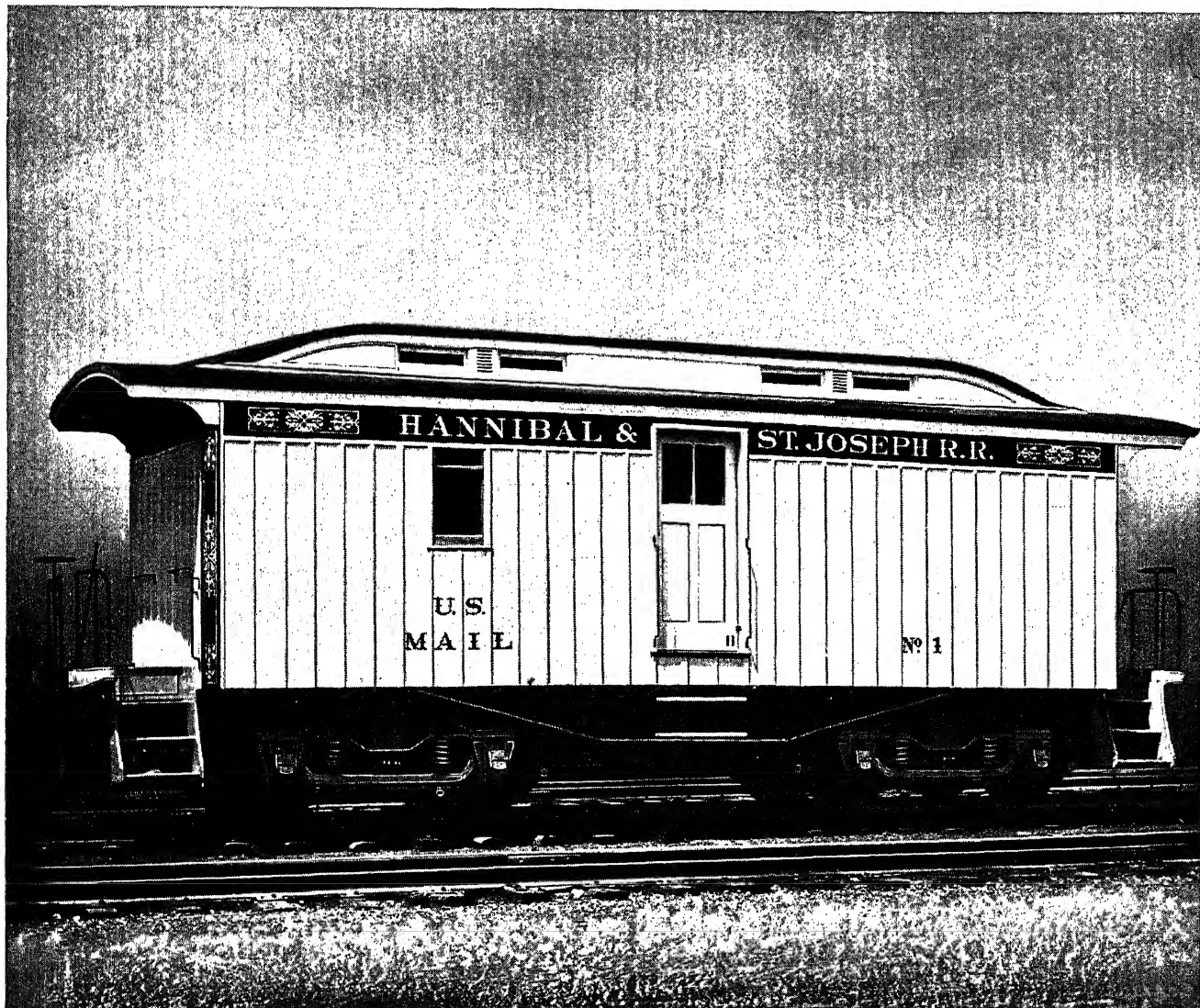
Of the Missouri River, and Tiresome Staging.

J. T. K. HAYWARD, Superintendent.

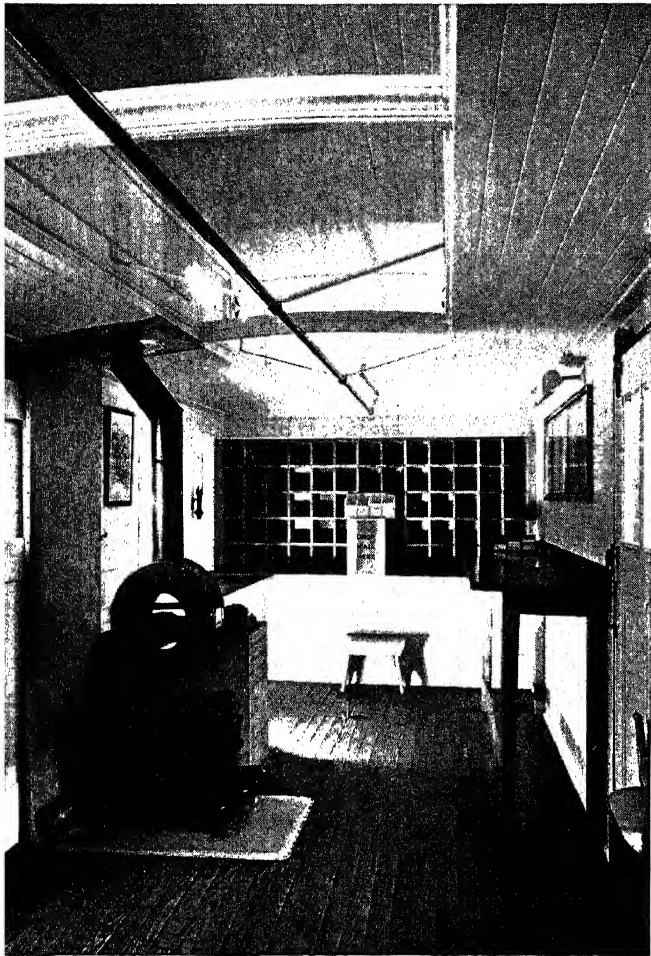
D. C. SAWIN, General Agent, St. Joseph.

St. Joseph City Directory 1860-1861

The Hannibal and St. Jo, as it was called in 1859 when it reached St. Joseph, Missouri, was justly famous until the completion of the first transcontinental railroad in 1869. It was the first line to touch the Missouri River, and the first (1862) to operate a car (modern reconstruction shown below) in which mail was sorted in transit.



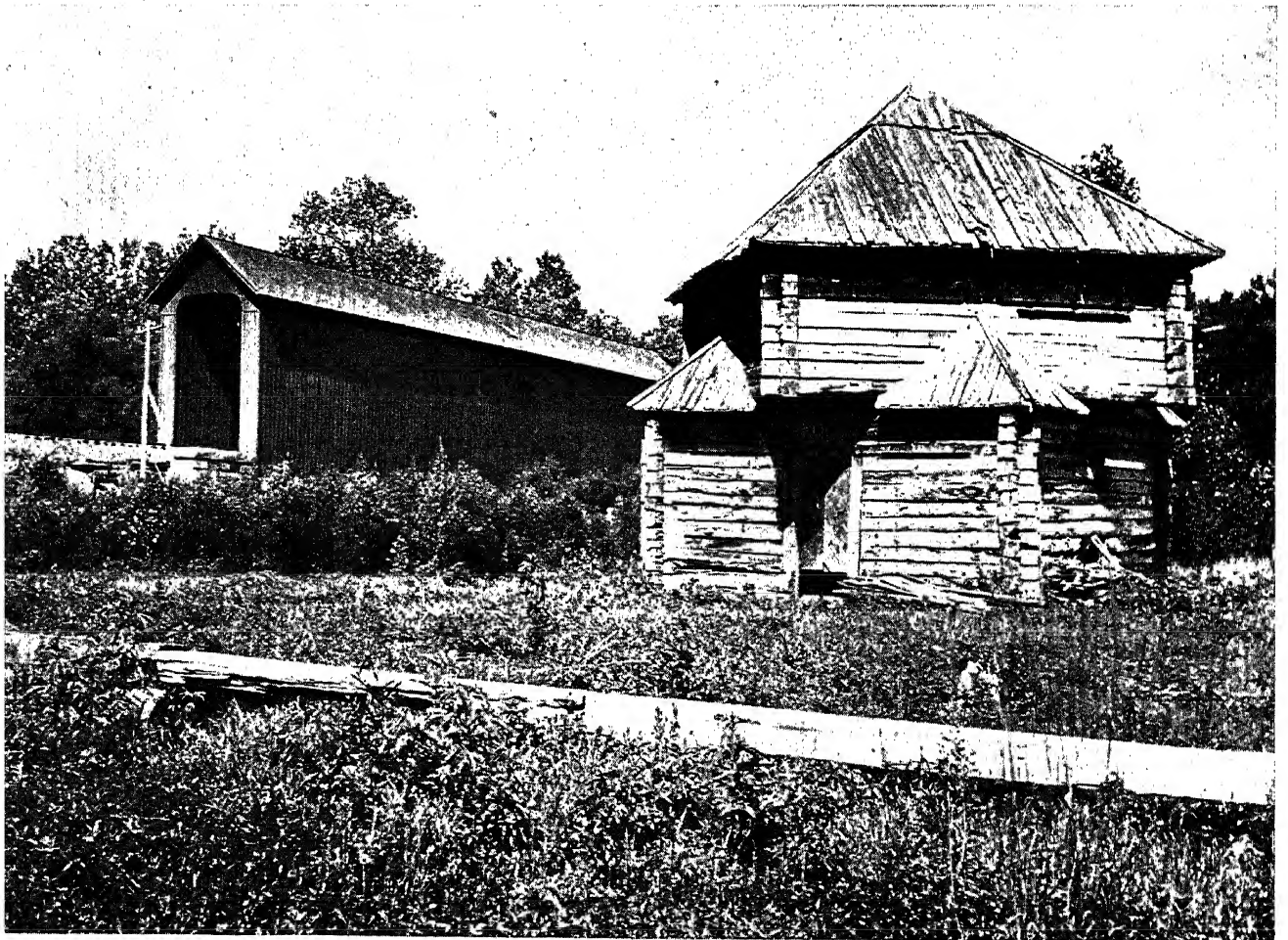
Hedrich-Blessing Studio



Hedrich-Blessing Studio

(Left) Interior of special mail car shown on preceding page. One of the early mail clerks was Fred Harvey, who later developed the famous chain of depot restaurants.

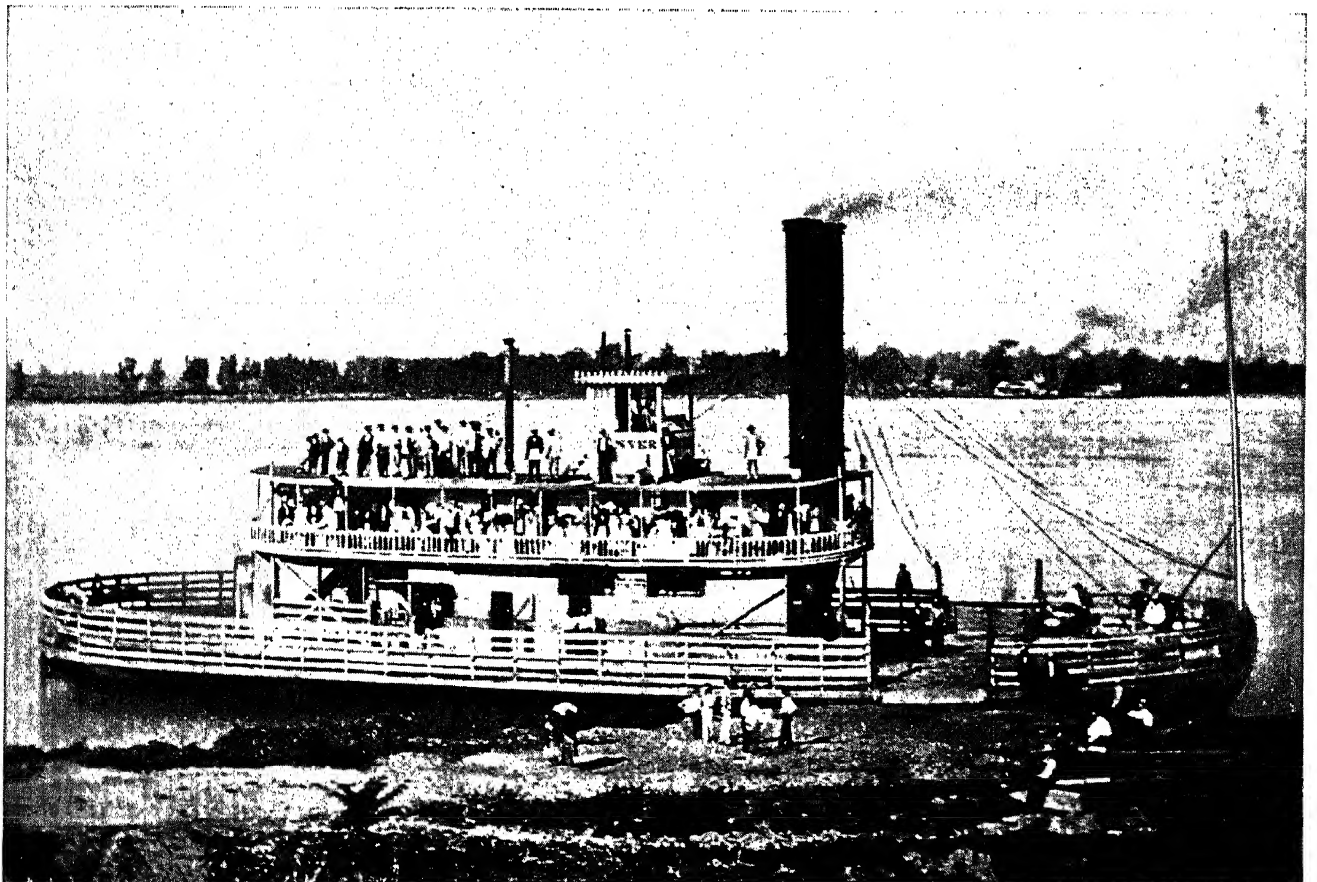
The men who built the Hannibal and St. Jo realized that the settlers whom it was bringing in were aiding the antislavery cause in Missouri, and when the Civil War broke out its thin strand, holding together the North and the Far West, was under frequent attack from pro-Southern guerillas. Effective defense was made from blockhouses such as the one below, still standing at the Chariton River.

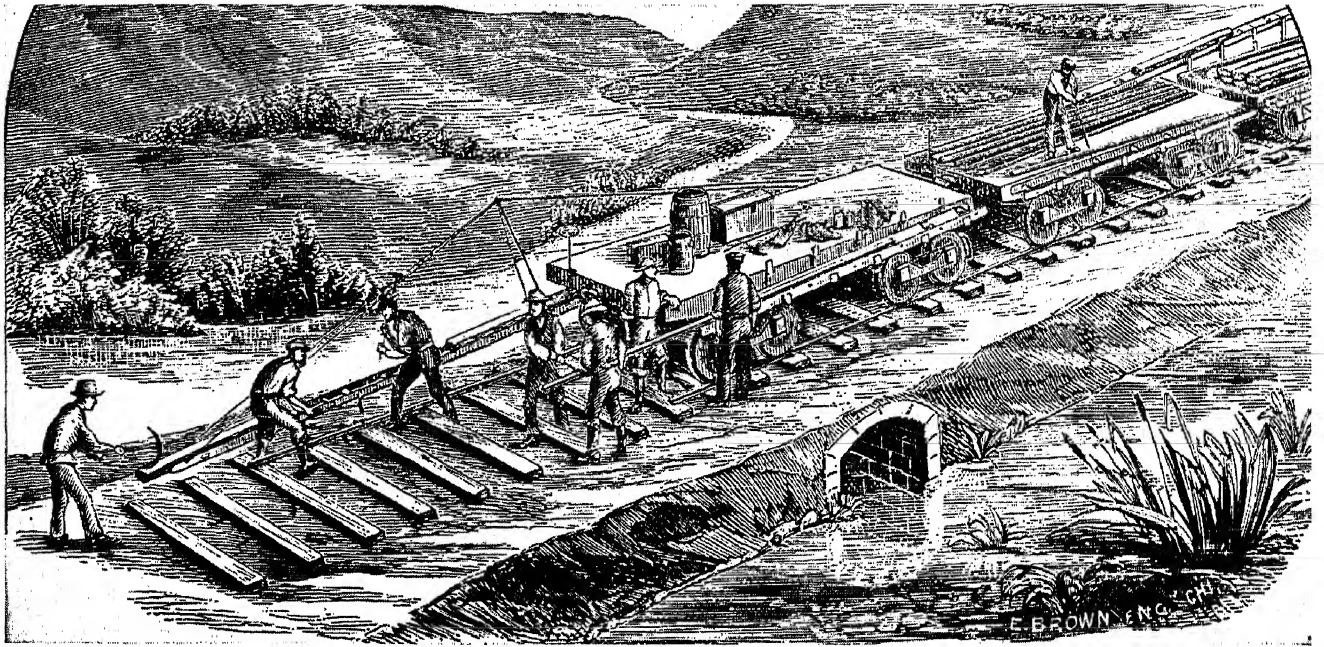




From "Scribner's Magazine," March 1889

In 1860 Butterfield's Overland Stage company started the "pony express," which, picking up the mails brought across from St. Joseph by the steamboat *Denver*, delivered them within 10 days to their California destination, through a carefully planned series of relays (*above*) every 33 miles, beating stage delivery by some 14 days.



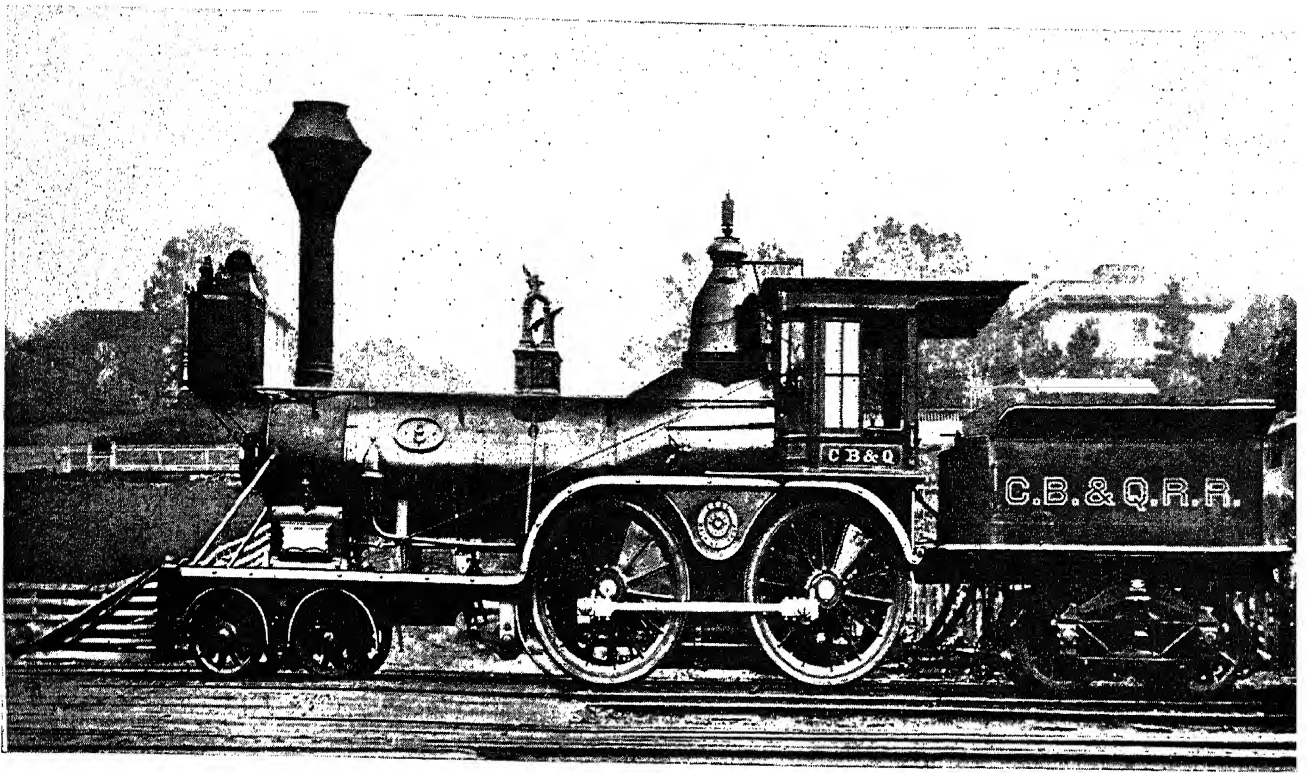


Four separate roads had shared in the federal grants of Iowa lands that would enable them, by the sale of those lands, to connect the Mississippi and Missouri rivers. Each of them was given alternate sections in a six-mile strip on either side of its line, with the provision that if so much land within the strip had previously been granted by the government to towns or individuals that the road's quota could not be filled, it could select sections within a fifteen-mile strip to make up the deficit. The Burlington and Missouri's share amounted in the end to 304,000 acres.

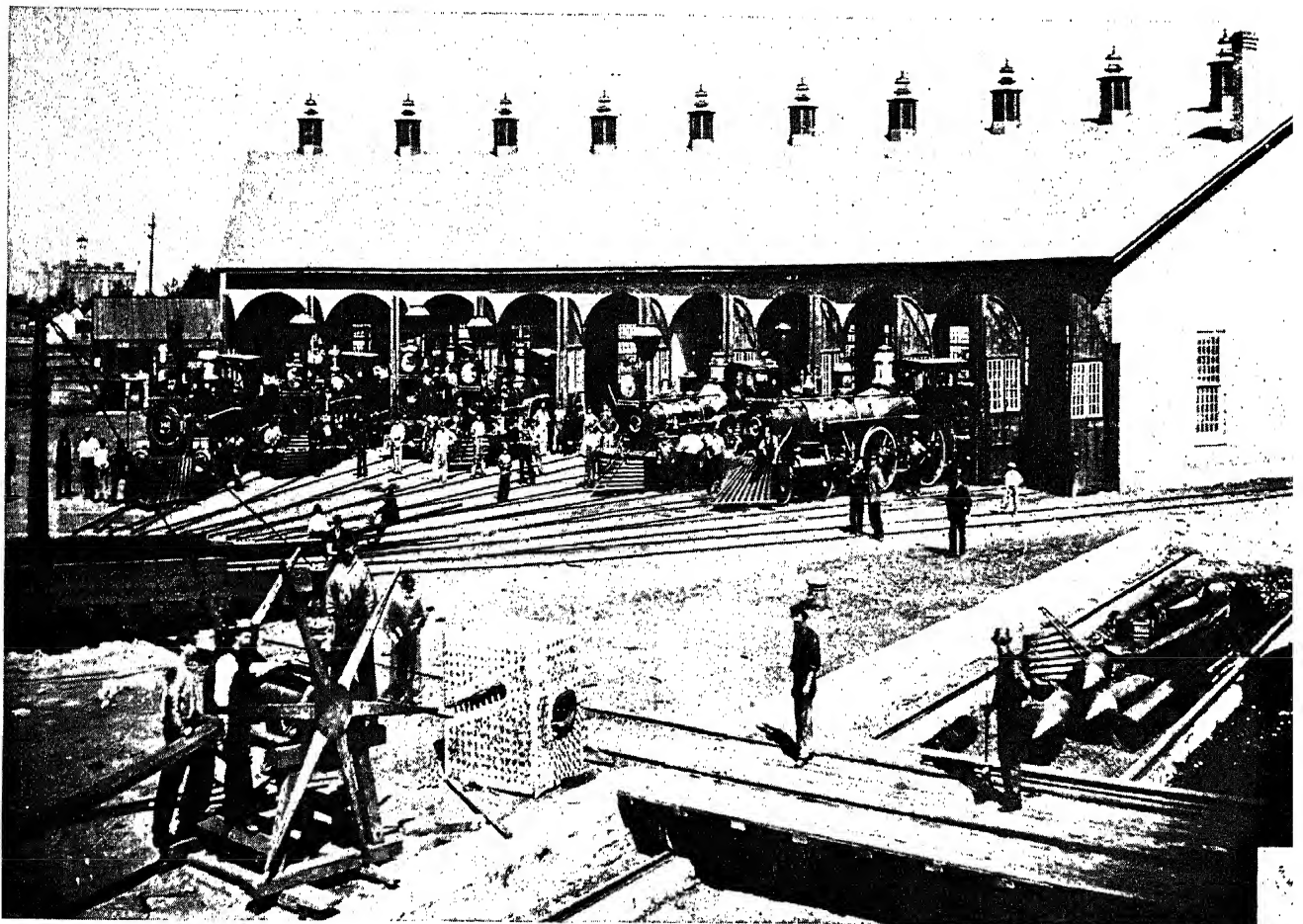
Construction, as shown on the letterhead of a Burlington director (*above*), reached Ottumwa before the Civil War. After the war, under the superintendency of Charles E. Perkins, the line reached the Missouri at East Plattsmouth in 1870.

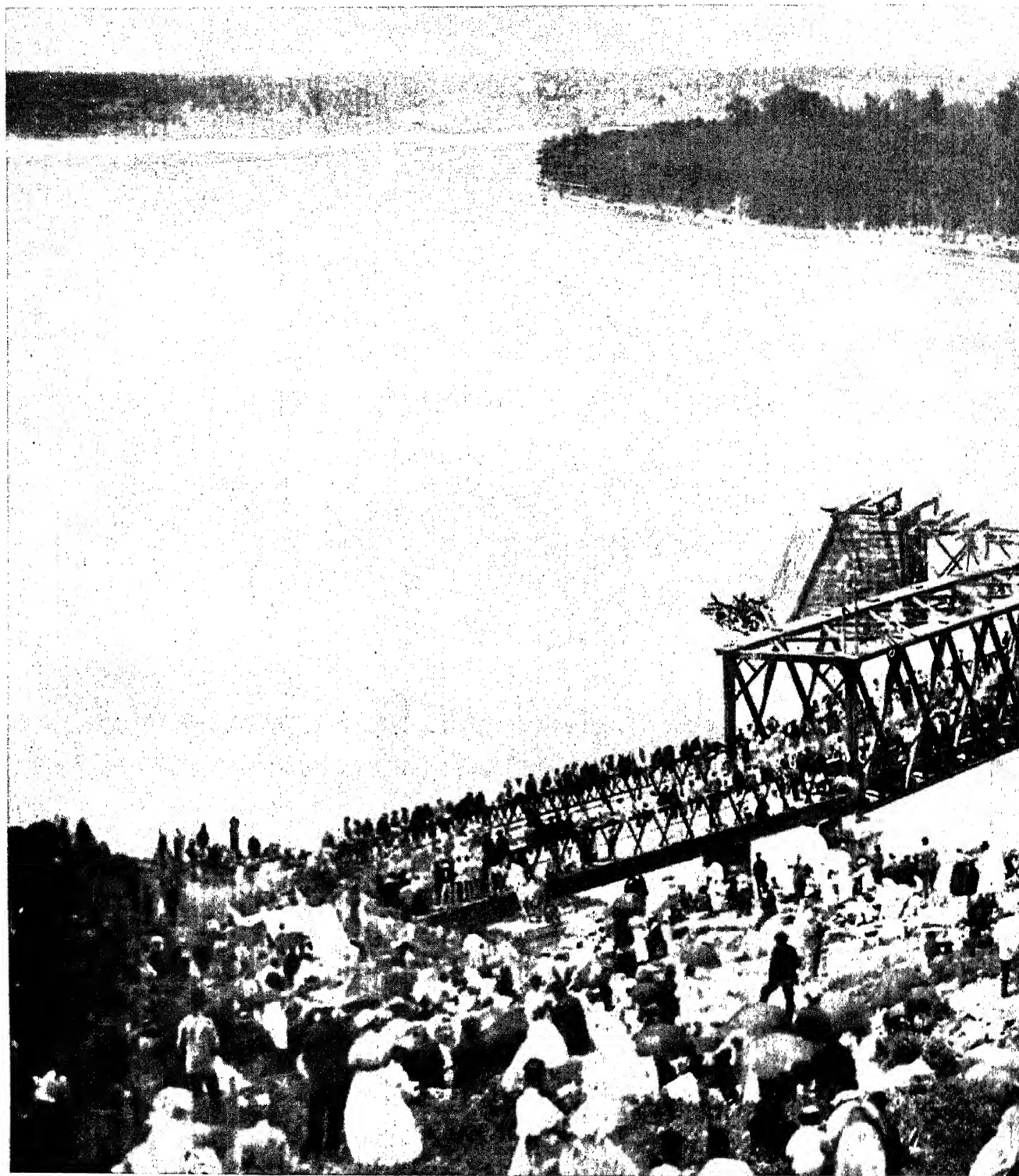
The picture below, taken from the Nebraska side before the Missouri River was bridged, shows the trains of the four railroads waiting at their tiny depots at Council Bluffs for the ferry from Omaha to bring over east-bound passengers. From left to right are the Chicago & North Western, the Burlington and Missouri River, the Kansas City, St. Joseph & Council Bluffs (a road subsequently taken over by the Burlington) and the Chicago & Rock Island.



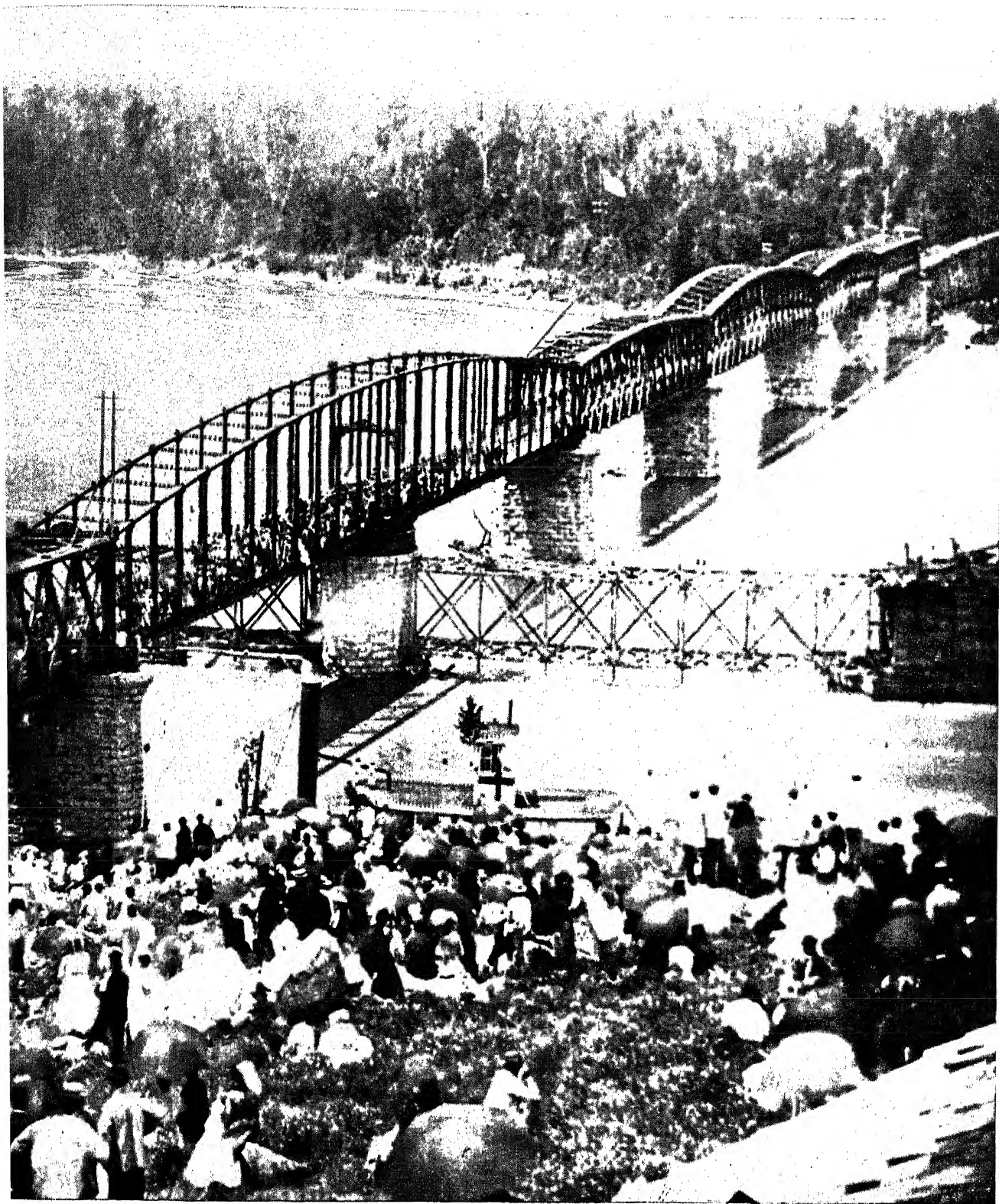


(Above) A wood-burner of the favorite American type, probably originally built by the Taunton Locomotive Works in 1856, rebuilt at the Aurora Shops in 1864–1865 at a cost of \$18,000. Twelve years after the picture No. 9 was again rebuilt. (Below) The Burlington Roundhouse at Galesburg in 1869.



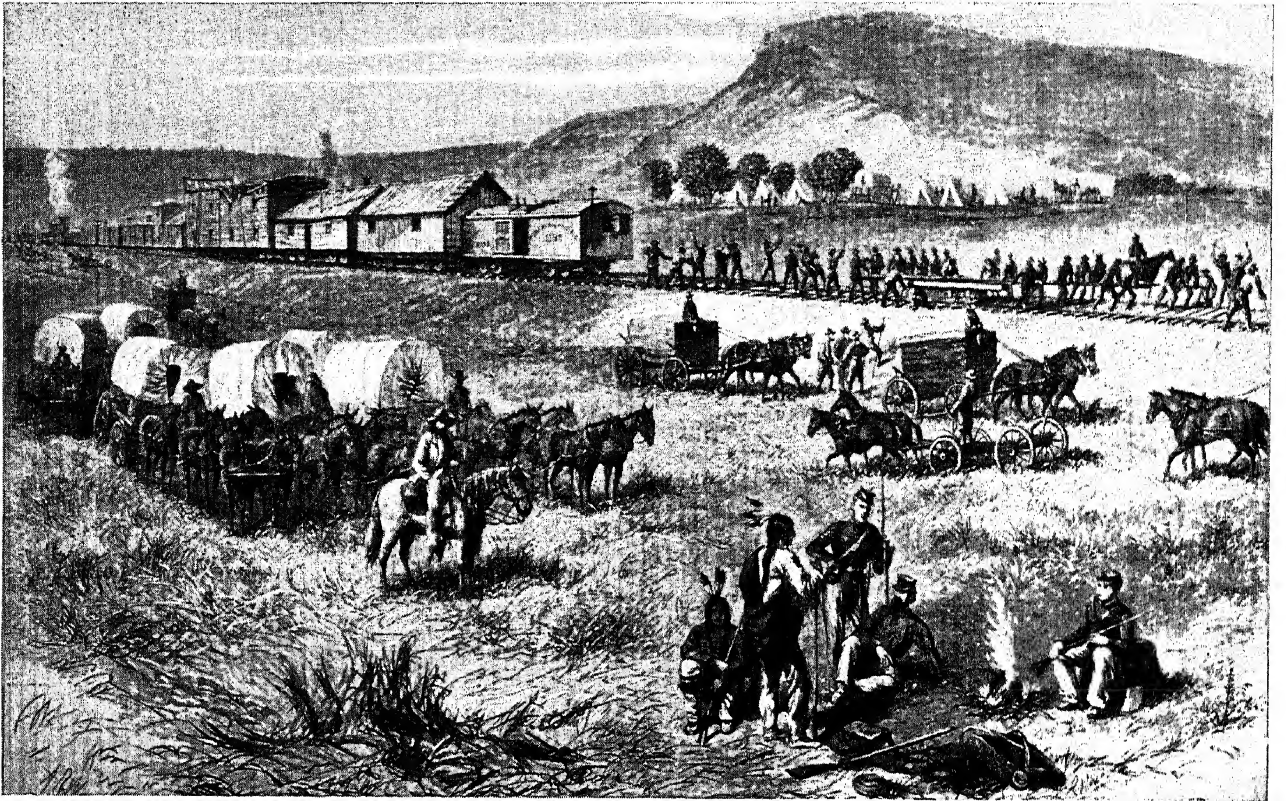


July 4, 1869, flags flew, bands played, orators spoke, and the frontier metropolis of Kansas City, population 28,000, rang with cheers as "the first bridge across the Missouri River" was opened, linking by rail the trans-Missouri River region with Hannibal, Quincy, St. Louis, Chicago, New York. James F. Joy, president of the Michigan Central, the Burlington and the Hannibal and St. Jo, had been gratified when Congress in 1866 authorized the construction of bridges across the Mississippi and, by a special clause, across the Missouri at Kansas City. While he rushed bridges across the Father of Waters at Burlington and Quincy, he acquired control of a



proposed railroad running from Cameron, a station on the Hannibal and St. Jo, down to Kansas City, and with various fellow backers of the Burlington joining him as trustees took charge of the erection of a bridge that would permit the line from Cameron to cross the Missouri into Kansas City itself. Within a decade the population of Kansas City would double. Railroad mileage in the fourteen states and territories which the Burlington would eventually serve had stood at 5474 in 1860, had jumped to 15,721 by 1870 and was preparing to double itself by 1880.

CHAPTER THREE. RED MAN, PALEFACE, IRON HORSE



From "Harper's Weekly," July 17, 1875

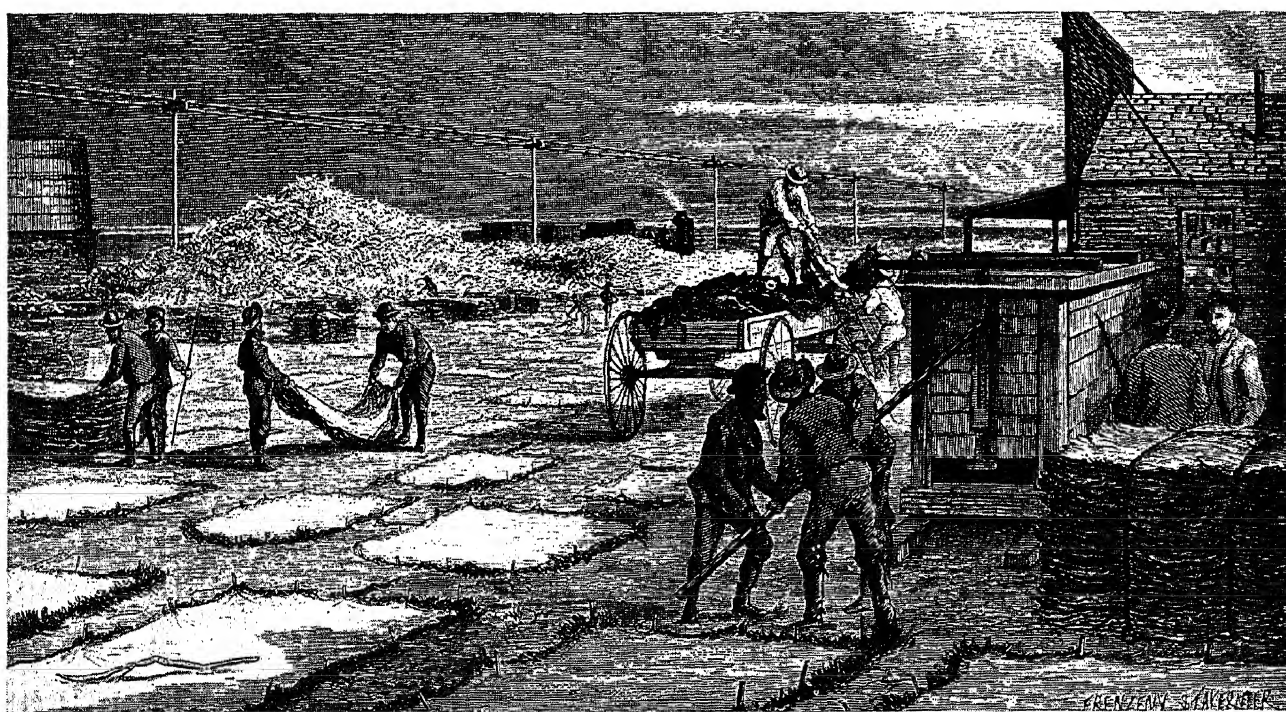
Railroad construction on the Great Plains.

IT was not merely the large vision of national unity, or the incessant pressure of would-be emigrants, that impelled the United States Government to subsidize railroad building on the Great Plains. The Army was agitated by a comparison of how much less it spent per mile for transportation by railroad east of the Mississippi than by wagon trains from the Missouri River west to the mountains and the Pacific. The conventional train was 26 wagons and 30 men, each schooner drawn by 6 oxen or 4 to 6 mules. Oxen were cheaper, lived wholly on grass and when they broke down with sore feet could be eaten, while mules demanded grain which must be hauled in the wagons, displacing freight. Such a wagon train in 1865 charged \$27 to haul each 100 pounds of freight on the 1200-mile journey from Fort Leavenworth, Kansas, to Salt Lake City — a trip of three to four months. With each wagon carrying some 6000 pounds of goods, the cost to shippers was more than \$40,000. Twenty years later the railroads charged \$1500 to ship the same amount of freight between the same points.



From "The Plains of the Great West," by R. I. Dodge, New York, 1877

It was the railroads, pushing across the Plains in the 1860's and 70's, which convinced the Indian that the paleface was no longer a friendly trapper who, if a squawman, was his brother-in-law, nor a harmless overland emigrant heading for the Pacific, but a prospective settler on the buffalo range itself, a ruthless killer of the buffalo upon which the red man relied for food, shelter and clothing, and a wholesale merchant loading freight cars with bison hides and bones. Turning to the war path the Indian kept the border blazing for years from the Dakotas to Kansas.



From "Harper's Weekly," April 4, 1874



From "Harper's Weekly," May 23, 1874

(*Above*) By slowly waving legs in air, hunter's assistant appeals to curiosity of antelope. (*Below*) One of the "jerk-line fourteeners" — mule team guided by one rein to lead pair and by fifteen-foot blacksnake whip in hands of bullwhacker — which freighted merchandise to isolated towns in the 1870's and railroad materials to construction crews.



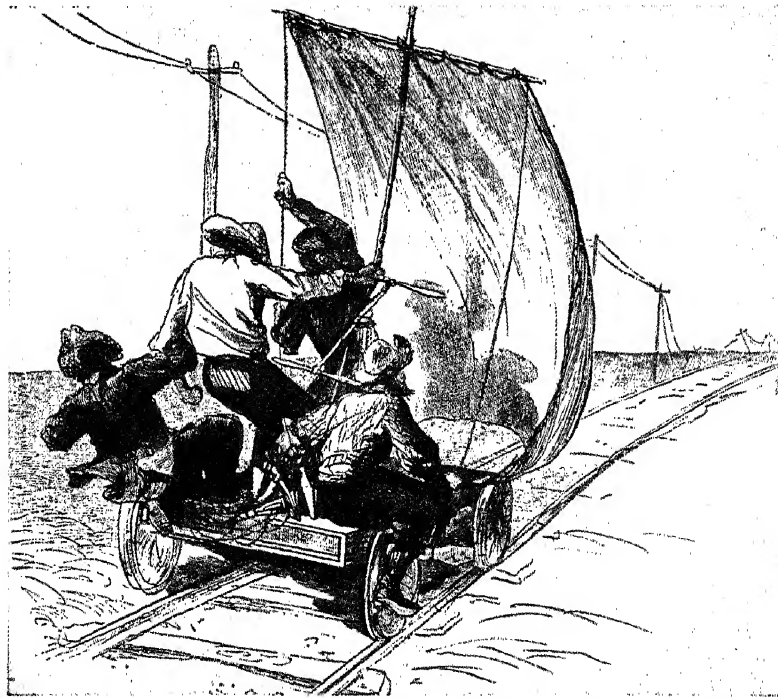
The most celebrated figure in the history of the Plains, William Frederick Cody, Iowa-born, Kansas-reared, pony express rider at fourteen, Union soldier, killer of buffalo for railroad commissaries (hence his immortal nickname "Buffalo Bill"), scout for U. S. Cavalry in Indian wars, actor, showman, eternal Adonis, dream hero of two generations of American small boys, is shown (*right*) as a scout shortly before the organization of his Wild West Show in 1883. (*Below*) Cody, with cane and cigar, poses with other stars of his show around the famous "Deadwood Coach" which, at the climax of every performance, fled thrillingly from pursuing Red Devils, its window and roof ablaze with desperate rifle fire. The coach was originally one of the Concord stages which in the 1870's traveled between the gold mining town of Deadwood, South Dakota, and Cheyenne, Wyoming, and which survived attacks by Sioux and bandits. The Burlington, reaching Deadwood February 1, 1891, brought out minerals and brought in sightseers anxious to see the town's "Boot Hill" cemetery with its graves of the noted Western characters, "Wild Bill" Hickok and his friend Martha Jane Burke, better known as "Calamity Jane," who reputedly once drove the Deadwood Coach to safety when bandits shot the driver.



From "True Tales of the Plains," by William F. Cody, New York, 1908



From "The Making of Buffalo Bill," by Richard J. Walsh, Indianapolis, c. 1928



From "Harper's Weekly," December 14, 1878

The extension of the telegraph paralleled that of the railroad across the Plains, carrying with it the same difficulties, for Indians delighted in jerking wires from poles and shooting workmen who made repairs. A switch in the wind could becalm the cars in which linemen sailed (*above*) and leave them to the mercy of savage bands. But no railroad transportation was ever so vulnerable to Indian attack as was the stagecoach, even when guarded by squads of federal soldiers who protected the United States mail. The drawing below errs in one detail: Indians proverbially fired upon the stage horses first in order to bring the vehicle to a stop.



Courtesy Chicago Historical Society



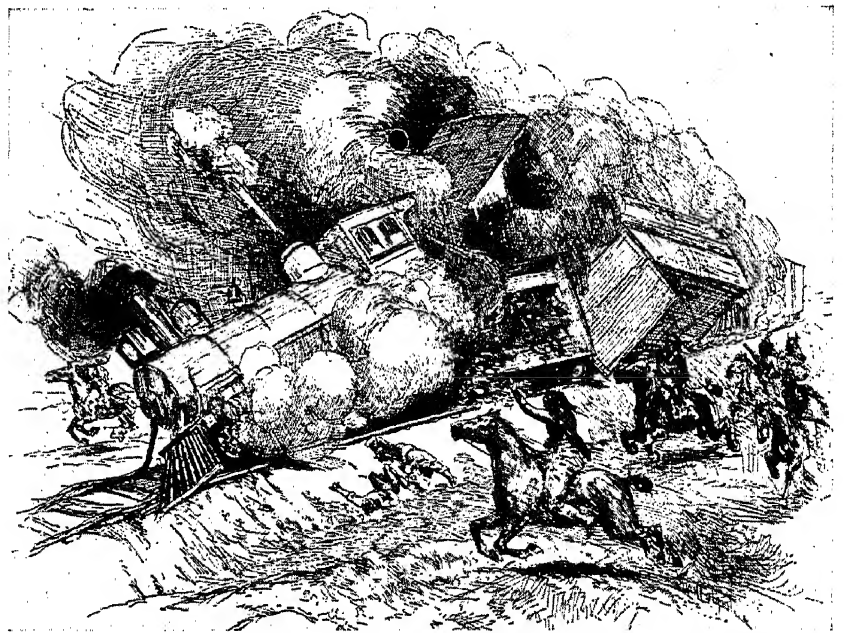
From "Harper's New Monthly Magazine," July 1867

Tales and pictures of heroism by scouts, soldiers and cowboys, and the atrocities of the "red devils of the Plains," flooded Eastern periodicals in the 1870's, spawning the "yellow-back dime novels" and, forty years later, the Wild West motion picture. The scene above may have

been imaginative in showing one of the central savages hushing the whoops of his fellows so that all might better hear and enjoy the screams of the white victim, but there seems no doubt that Indians did, upon occasion, build bonfires upon the bare bellies of captives.

In 1866 when the Iron Horse had pushed 270 miles west of Omaha, a hitherto friendly Indian leader, Roman Nose, head chief of the Cheyenne, told the white man, "If the railroad continues, I will be

your enemy forever." It continued and he threw his skilled fighters into the general opposition to the paleface invaders. Hundreds of construction laborers were killed and occasionally a locomotive was derailed, but the Iron Horse kept on, and as it crossed and crisscrossed the West, immigration poured in. Nebraska, for example, had 123,000 people and 705 miles of railroad in 1870 and in 1880 had 452,000 population and 5295 road miles.

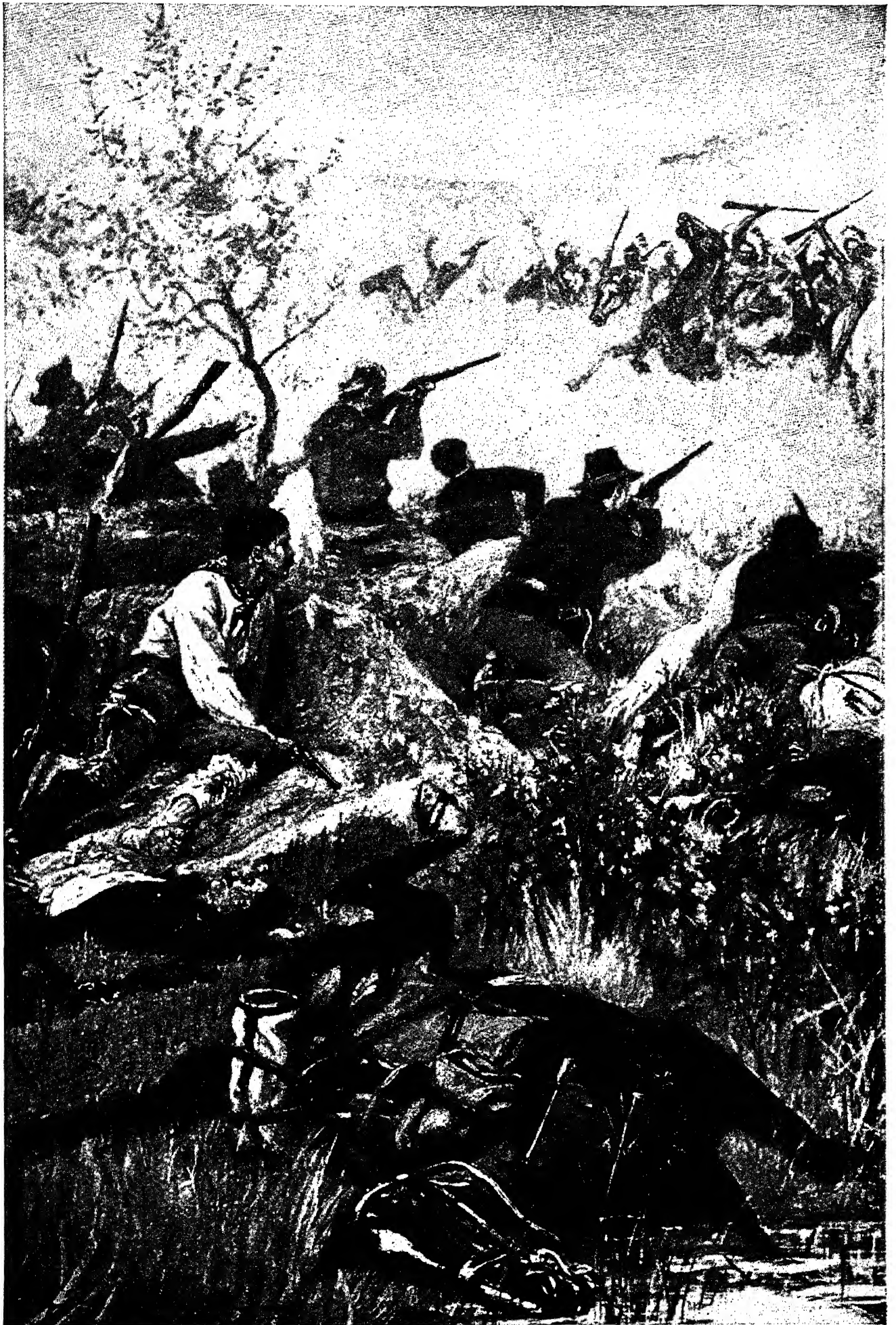


*From "The Indian Wars of the United States,"
by Edward S. Ellis, Grand Rapids, 1892*



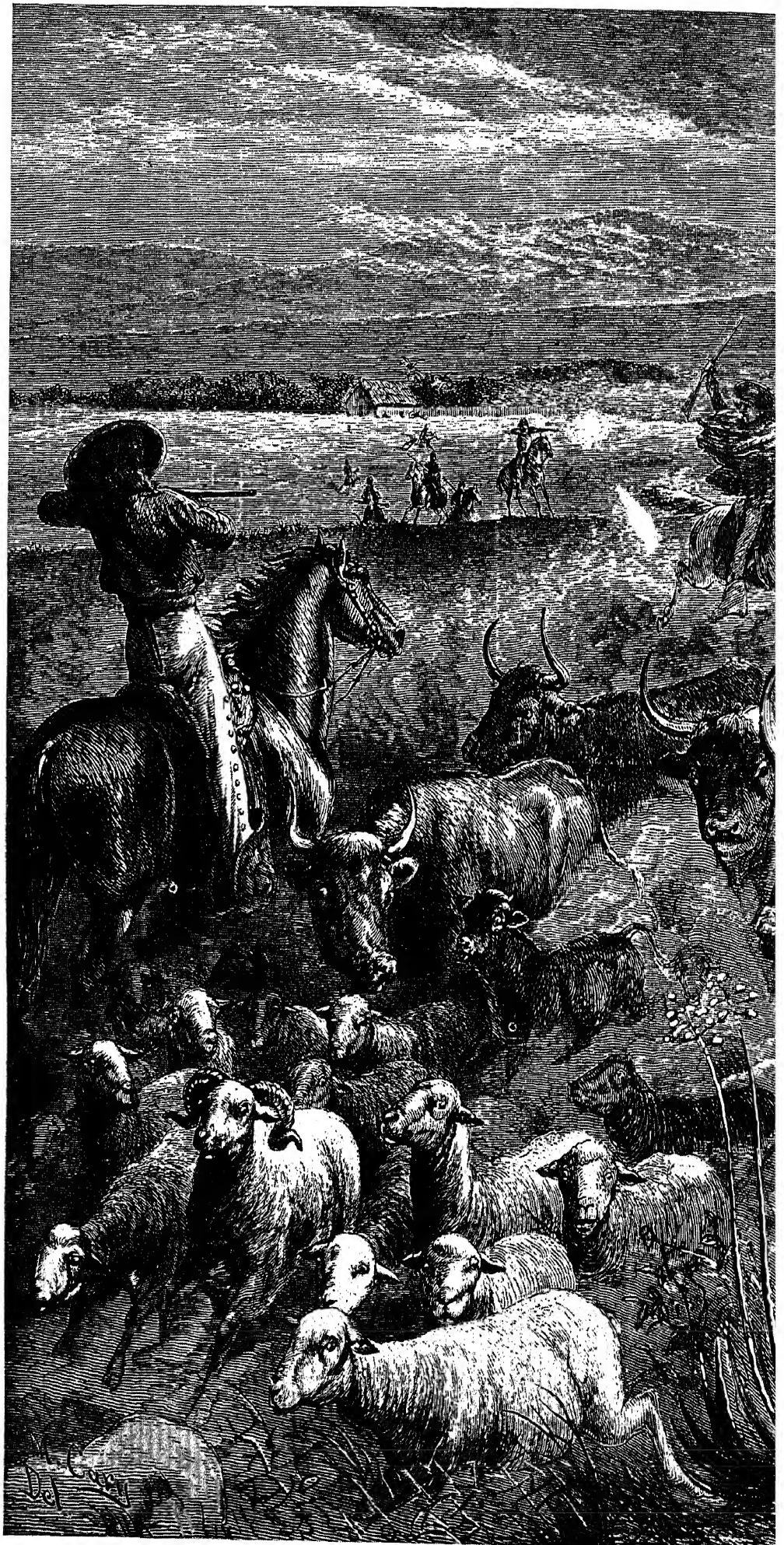
From "The Indian Wars of the United States," by Edward S. Ellis, Grand Rapids, 1892

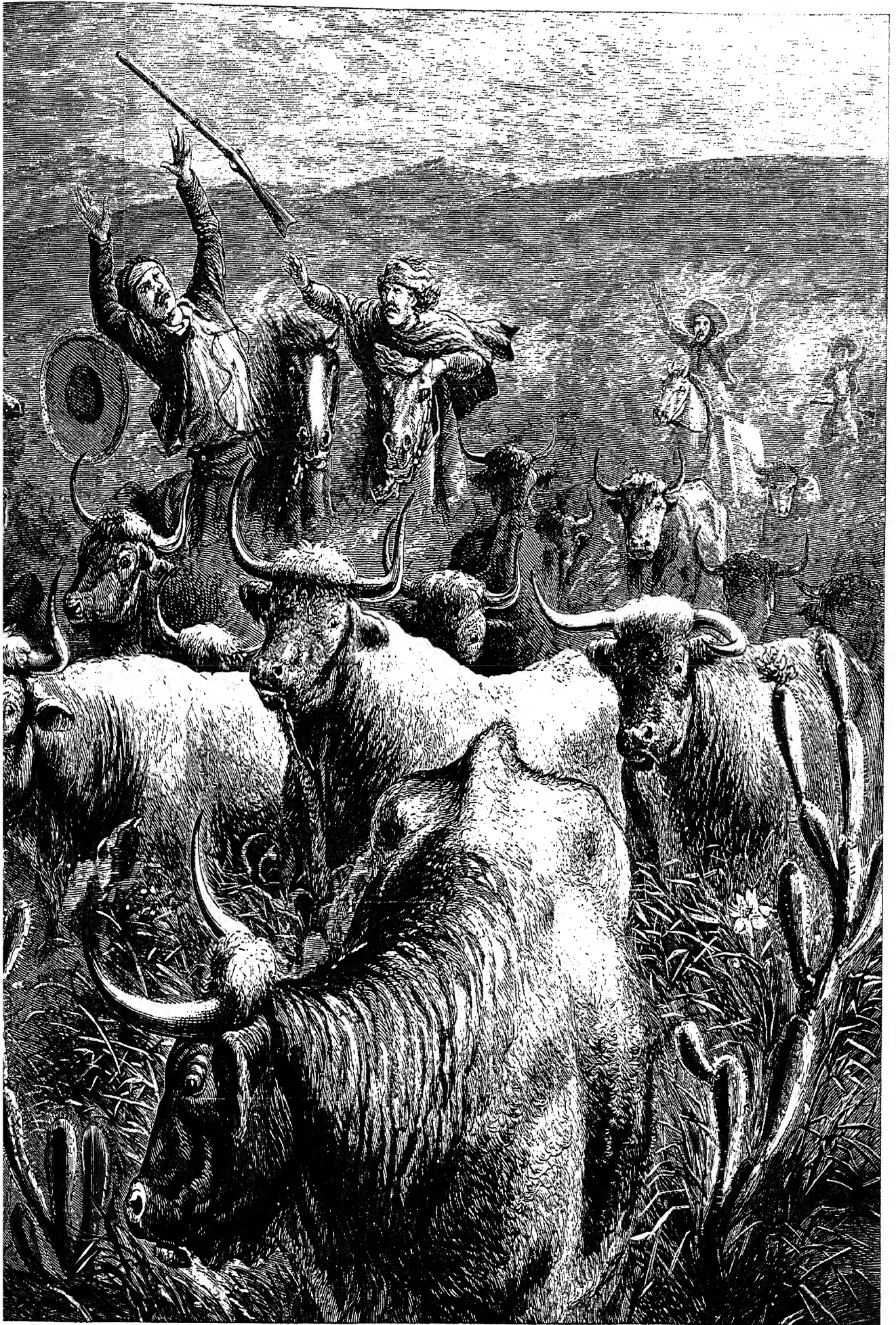
Three years after Roman Nose threw his gauntlet in the face of the Iron Horse he cornered one of the U. S. Cavalry bands that had been pursuing him. With a thousand Cheyenne at his back, on September 17, 1868, he surrounded Major George A. "Sandy" Forsyth and fifty troopers and scouts on a small, sedgy island in the Arikaree Fork of the Republican River in northeastern Colorado. For a week Forsyth stood off the frequent charges and endured the constant rain of bullets from the encircling hills. A battle-hardened veteran of the Civil War — he had accompanied Phil Sheridan on the latter's famous ride to Cedar Creek in 1864 — he held his beleaguered band to their posts even though the meat which they sliced from dead horses soon became too putrid to eat and the Indian bullets hit man after man. Forsyth sent out two of his scouts, Trudeau and Stillwell, to bring relief from the nearest cavalry post, and the two men at one point were concealing themselves from passing braves when a rattlesnake slipped up and coiled to strike. Stillwell lifted his gun, but before he could shoot the reptile, Trudeau spat tobacco juice squarely into its face, causing it to turn tail in silent disgust. The two scouts got through, and rescuers arriving on the seventh day of the siege found Forsyth and twenty men hit, six of them dying. The Indians' loss was never known. One defender, Lieutenant Frederick H. Beecher, nephew of the preacher, Henry Ward Beecher, showed such selflessness as he lay dying from a wound that the survivors named their fight the "Battle of Beecher's Island." When the Burlington Railroad stretched its line to Denver in 1882, the route passed through the town of Wray, Colorado, only twelve miles north of the battlefield.



From "Indian Fights and Fighters," by C. T. Brady, New York, 1904

Cattle and sheep
raisers along the Rio
Grande in Texas
were harassed in the
70's not only by
Indians and native
American "rustlers"
but by raiding bands
of Mexican outlaws
who swooped across
the border and swam
their booty over the
river.





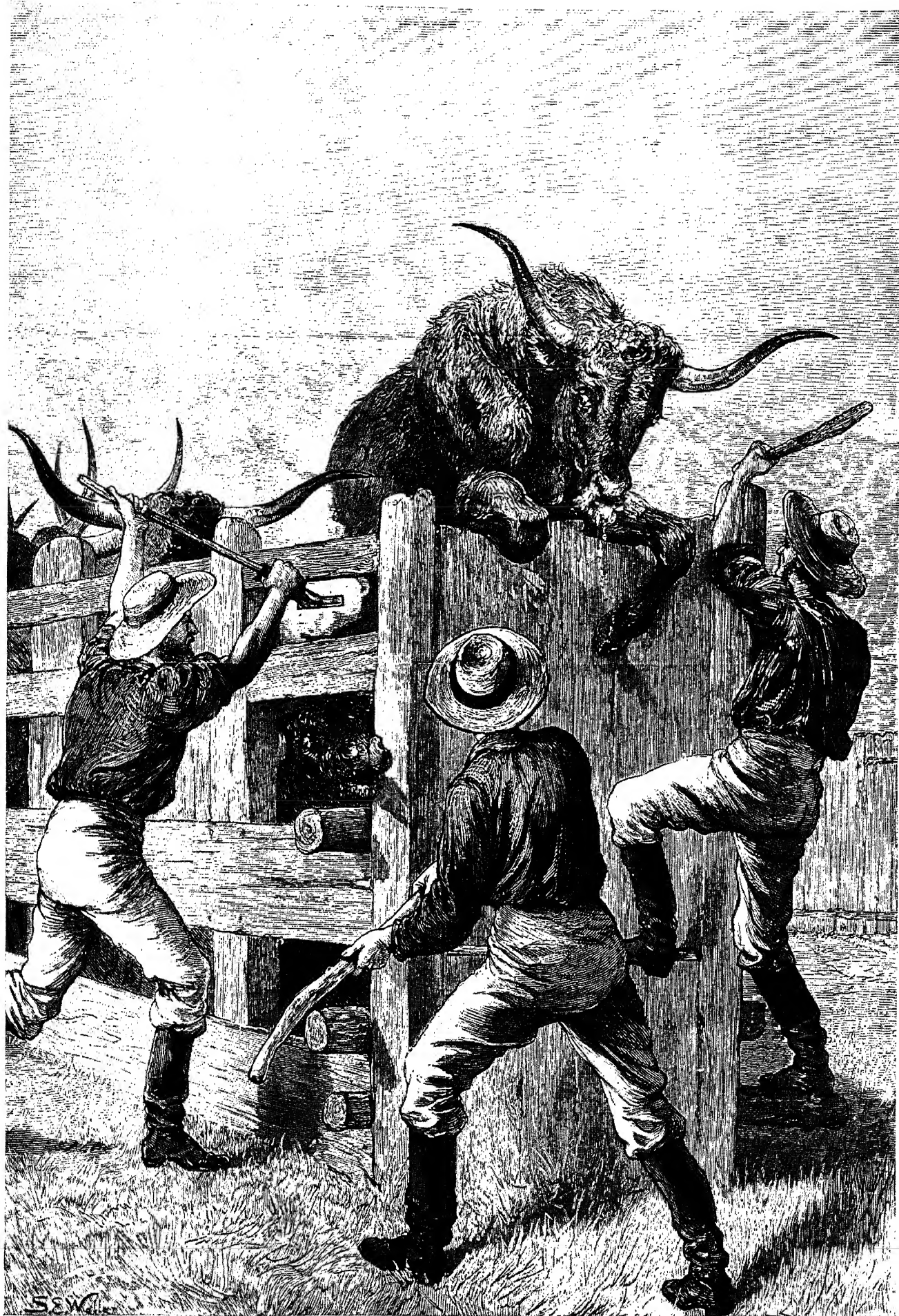
From "Harper's Weekly," January 31, 1874



Courtesy R. A. Russell

"Custer's Last Stand" (*above*), painted by Thomas Hart Benton and occurring June 25, 1876, at the Little Big Horn in Montana, was the most famous fight on the Plains. The annihilation of General George A. Custer and 225 of his Seventh U. S. Cavalrymen was a national sensation. It was the most brilliant of all Indian victories over the white men. Blame for the disaster was bitterly disputed and mystery always overhung it, since no white participants survived it and the red men preserved silence. A monument to Custer stands today on the battlefield near Hardin on the line which the Burlington extended in the 1890's to Billings.

Provoked by Custer's defeat, the United States Army swiftly removed the hostile redskin from the Great Plains. Cattle raising became profitable. Grazing on the public domain and shipped east by the new railroads to packers, steers flooded the British Isles in the form of dressed beef, and English writers and artists, hurrying to the scene, gave England and Scotland spirited pictures of the industry (*opposite page*). When British financial investigators reported that the cow business was earning 30 per cent annually a gold rush ensued, with British syndicates investing by 1882 an estimated \$30,000,000 in ranches from the Dakotas to Texas.



From the "Graphic," London, April 12, 1879

An English concept of branding cattle on the American Plains.



Courtesy Nebraska State Historical Society

Settlers taking the law into their own hands.



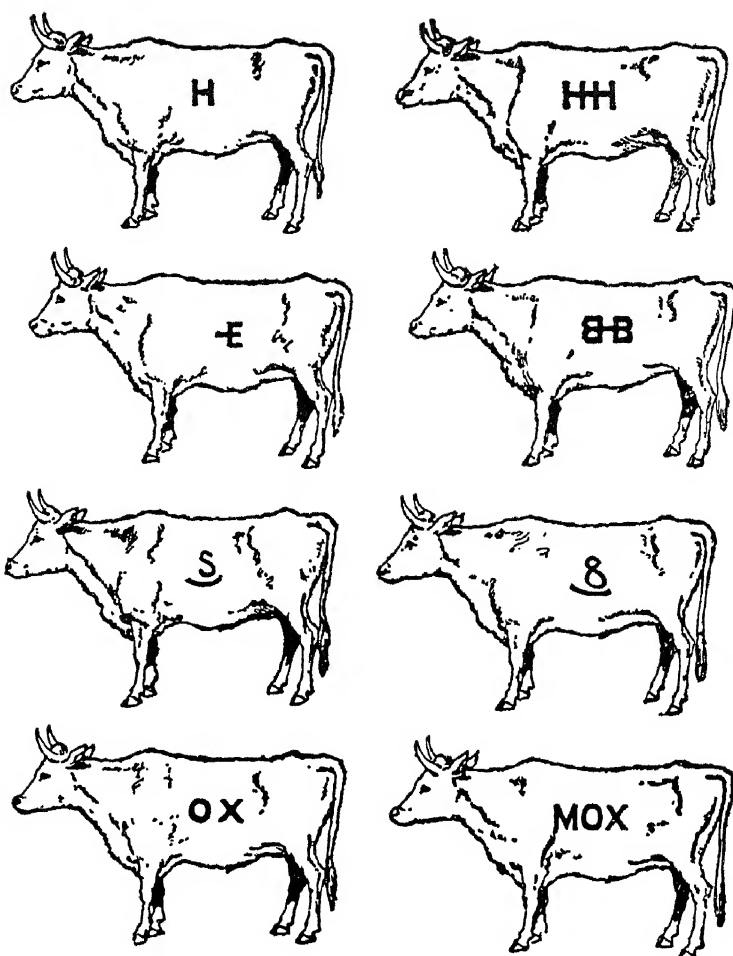
From "Harper's Weekly," October 13, 1877

Cattlemen raiding sheep camps in Colorado.

The bonanza of the cattle raisers, whose herds spread across the open range like stars across the sky, lasted through the 1870's and early 80's, then broke in 1885 and '86 when murderous blizzards and withering droughts converged upon the Plains. By that time the economic position of the "cattle baron" had been weakened by overstocking and by the inroads of "dry farmers," who not only plowed up the range but fenced their acreage to protect it and their few cows from the migratory herds. When the big cow outfits flung wire fence across sections of the range which they

ORIGINAL.

CHANGED.



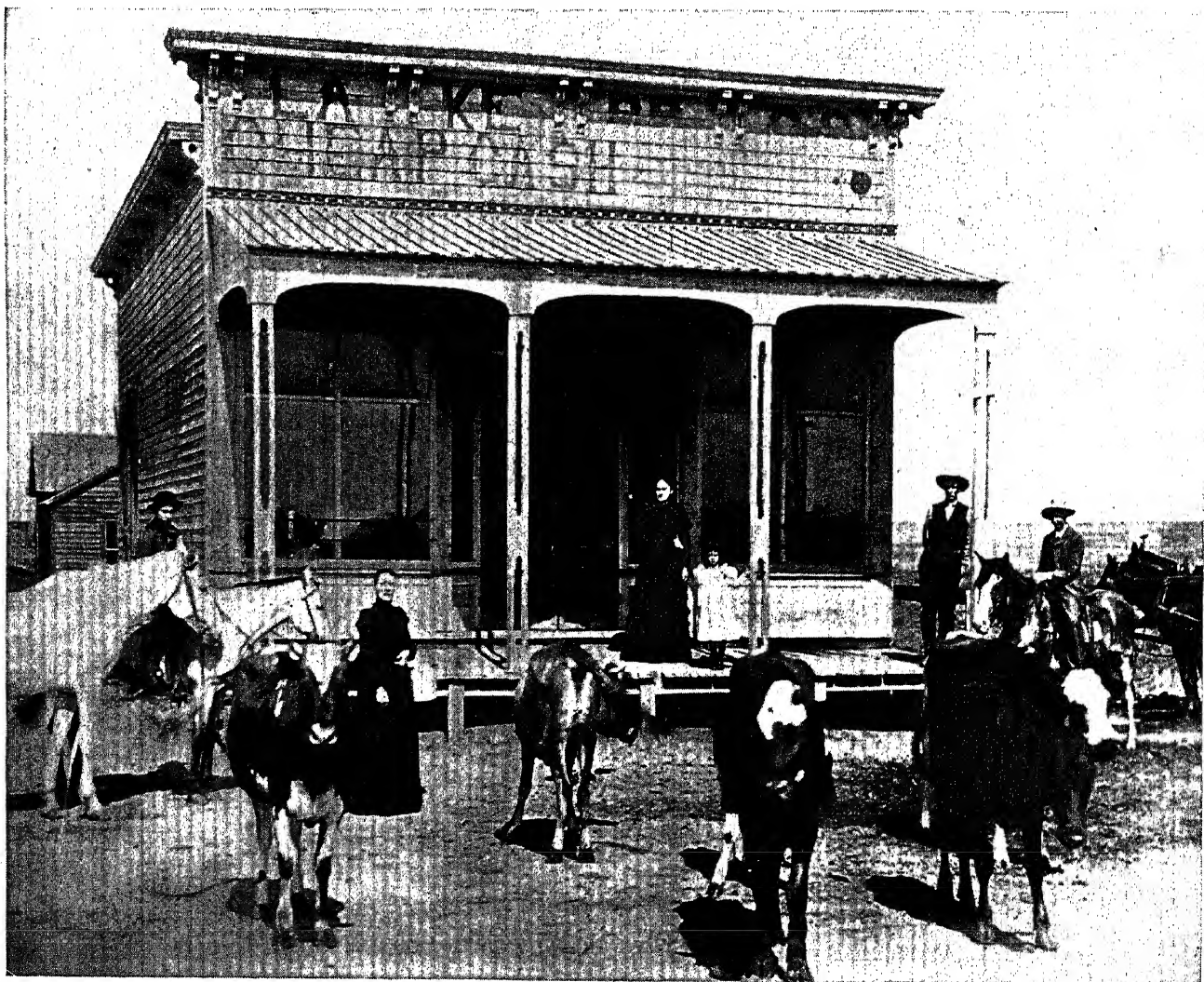
From "Frank Leslie's Illustrated Weekly," June 2, 1892

claimed as "first-comers" rather than as legal owners, the dry farmers fought back and the cutting of wires by both adversaries was common. The tableau (*opposite page*) of masked men at this work was staged in 1885 by a remarkable photographer of Kearney, Nebraska, S. D. Butcher, to re-create an actual case. Charges of cattle rustling were incessant and the artful use of hot irons to alter brands (*above*) was endlessly denounced and exposed. The chronic triangular trouble between "big" cowmen and "little" cowmen and the farmers culminated in the "Wyoming Cattlemen's War" in the spring and early summer of 1892. Although the conflict, which centered in Johnson County, did not interrupt the construction gangs building the Burlington's line across northwestern Wyoming — reaching Sheridan November 22, 1892 — it did cause the road to postpone building a spur which had already been surveyed from its line to Buffalo, the cow-town metropolis of Johnson County. The spur was never built. Along the lines of the Burlington as well as all roads crossing the range, there was continuous war between cattlemen and sheepmen (*opposite page*) — raids which were to continue intermittently up to 1920 in northwestern Colorado, for example. However, the chief reason for the disappearance of the limitless cow range and the "Wild West" was the advent of farmers, via the railroads, and the substitution of better-bred grain-and-grass-fed cattle for the wandering range steer.



Courtesy Val Kuska, Omaha, Nebraska

By the turn of the century the red man no longer fought the railroads but helped build them.
 (Above) A brave works on Burlington grade between Toluca, Montana, and Cody, Wyoming.
 (Below) "Lake Grocery," Fleming, Colorado, on Burlington line to Cheyenne, 1885.



CHAPTER FOUR. YEARS OF EXPANSION

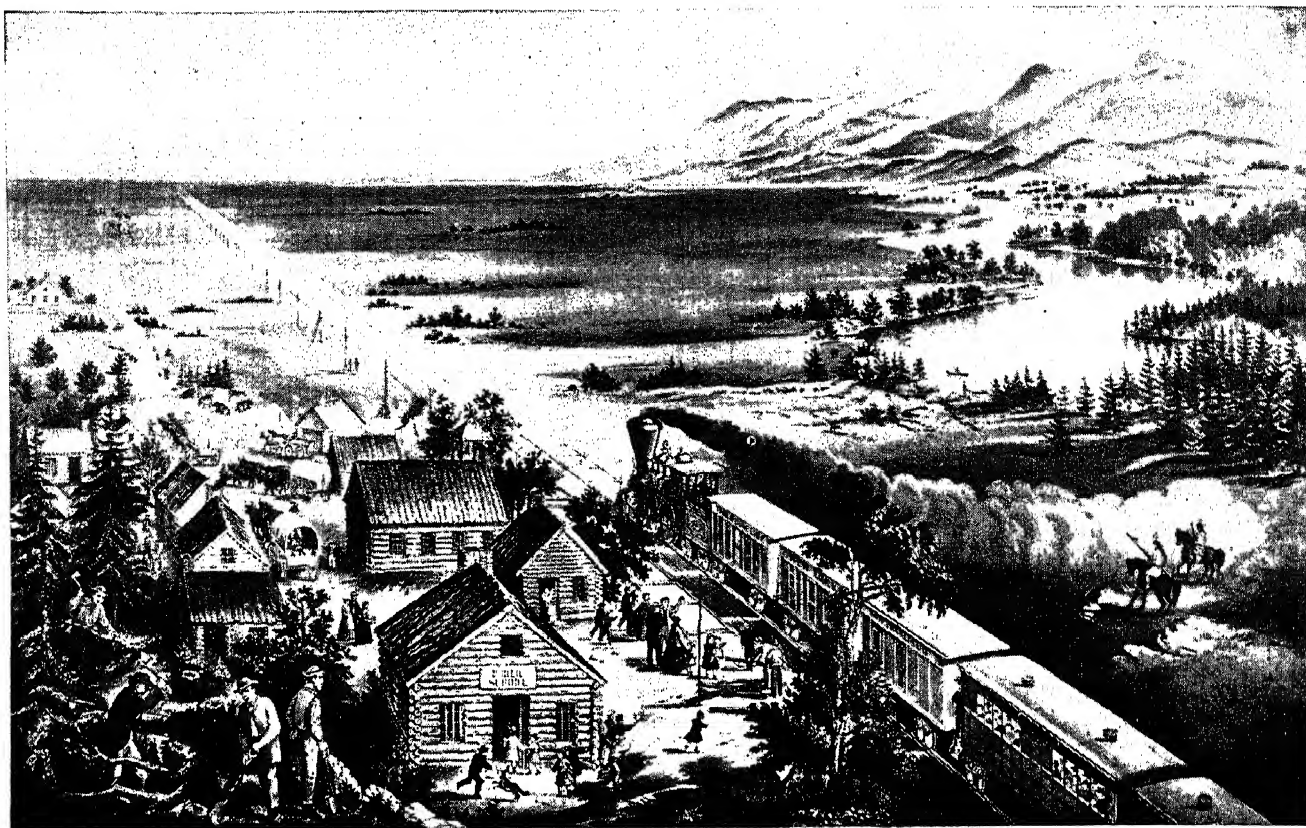
IT is impossible for any of the great stem lines of railroad to stand still," John Murray Forbes told his stockholders when, in 1878, he formally assumed the presidency of the Burlington, whose finances he had controlled so long.

"The point to aim at," he continued, "is one in which our interests are identical with those of the people around us — namely, to meet the natural and healthy wants of the country just as fast as it is ready to pay a fair return for capital with reasonable safety from unjust legislation."

Forbes was facing a situation in which all railroads, whether they were operated efficiently and honestly or as pawns of stock-market gamblers, found themselves. Being the first great corporations in the nation and situated closer to the people than any others, the railroads were the first to meet the rising demand for government regulation. All across the West the railroads were under attack for an "evil" born of ruthless competition — the practice of charging lower freight rates for long hauls where lines vied with each other and with waterways, and higher rates for short hauls where a road had a monopoly — and the secret "pooling" agreements made between roads reducing incentive to ruinous rate cutting. Demand for state and federal laws enforcing uniform rates and curbs on speculation agitated both Republican and Democratic parties and caused the rise of the Granger Movement, which, when it could not capture the old parties, threatened to form a new one. Hard times added fuel to the flames. The fact that most roads were controlled by Eastern capitalists made it easy for critics to blame Wall Street for railroad ills, a situation dramatized in 1882, when William K. Vanderbilt reputedly said, "The public be damned!"

Although Forbes never permitted the Burlington to become involved in the financial antics of such speculators in railroad stocks as Jay Gould, he saw the reform agitation as an unwarrantable interference with the sober necessity of maintaining his lines and buying new ones to keep up with his strenuous competition. He built and pieced together so many branch lines that "the Burlington's cat-tails" became a common phrase among railroaders. Between 1870 and 1900 the Burlington pushed through to Denver, to St. Paul and the wheat fields, to the coal mines of South Dakota and Wyoming, to Billings, gateway of the minerals and lumber of the Pacific Northwest, and it began the extension which was to reach the coal regions of southern Illinois after the turn of the century. In the 1880's the Burlington System grew from 2771 to 5160 miles, and by 1900 was operating 7545 miles of its own and controlling 736 more.

For all that Forbes feared the public trend toward governmental control — a



Currier & Ives, 1868

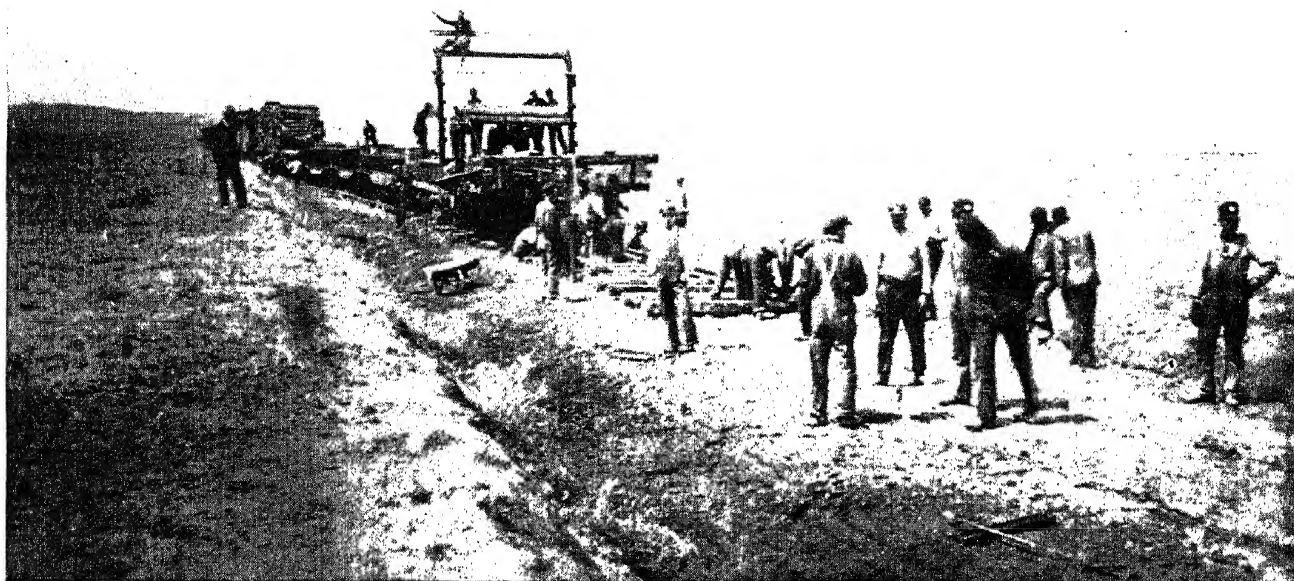
“Across the Continent.”

tide that in 1887 produced the federal Interstate Commerce Act — his management enabled the Burlington to pay dividends steadily through the troubled 70's and the difficult years following '87, rarely letting them fall below 6 per cent and once, in 1880, raising them to $11\frac{1}{4}$ per cent — a record of continuous payment that would also be preserved by the road thereafter.

In every symbolic sketch of the West in the great boom years following the Civil War the Indian, the buffalo herd and the trapper are shown giving way before the advance of civilization, connoted by the covered wagon and the schoolhouse, and, as in this Currier & Ives print of 1868, by delightfully cool and dapper men who quickly knock together neat log houses without effort or strain. The railroad here, as in all such sketches, holds pride of place. These were days of tremendous faith in America's destiny. In granting lands to railroads, so that they might extend their tracks into unsettled areas, Congress itself reflected that same faith. The Burlington and Missouri River Railroad, advertising these lands for sale at low prices, \$4 to \$12 an acre, and on easy ten-year payment terms, reflected it also in quoting, on the first page of one of its brochures, these lines from Whittier's "On Receiving an Eagle's Quill from Lake Superior":

I hear the tread of pioneers
Of nations yet to be:
The first low wash of waves where soon
Shall roll a human sea.

The rudiments of empire here
Are plastic yet and warm;
The chaos of a mighty world
Is rounding into form.



Reaching Lincoln in 1870, the new company, the "Burlington and Missouri River Rail Road Company in Nebraska," pushed westward through often unsettled prairie territory. The railroad determined the location and the names of towns, as in the alphabetical series — Crete, Dorchester, Exeter, Fairmont, and on to Kenesaw.



Birth of a new town on the Burlington.



From "Harper's Weekly," July 20, 1878

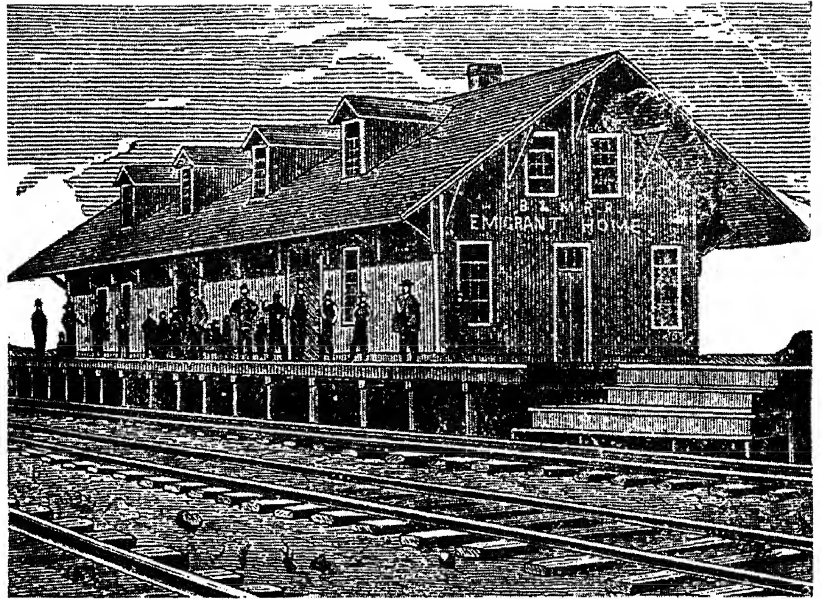
Over 8,000,000 immigrants entered the United States between 1870 and 1890, and in the latter year over 3,000,000 foreign-born were counted in the states touched by the Burlington. Settling in colonies, in general areas or as individuals, they brought energy, thrift and creative force to both agriculture and the industrial towns which rose along the railroads.

A farmer from the interior seeking a wife among the immigrants at Castle Garden, New York City.



From "Frank Leslie's Illustrated Newspaper," September 13, 1884

Pouring off the ships in Eastern harbors, so many immigrants from every country in Europe, after 1870, sought new homes in the promised land of America that the migration ranks with the greatest mass movements of population in history. The railroad deliberately and systematically encouraged the flow. Both the Hannibal and St. Joseph in the 1860's and the B and M in the 1870's and later main-

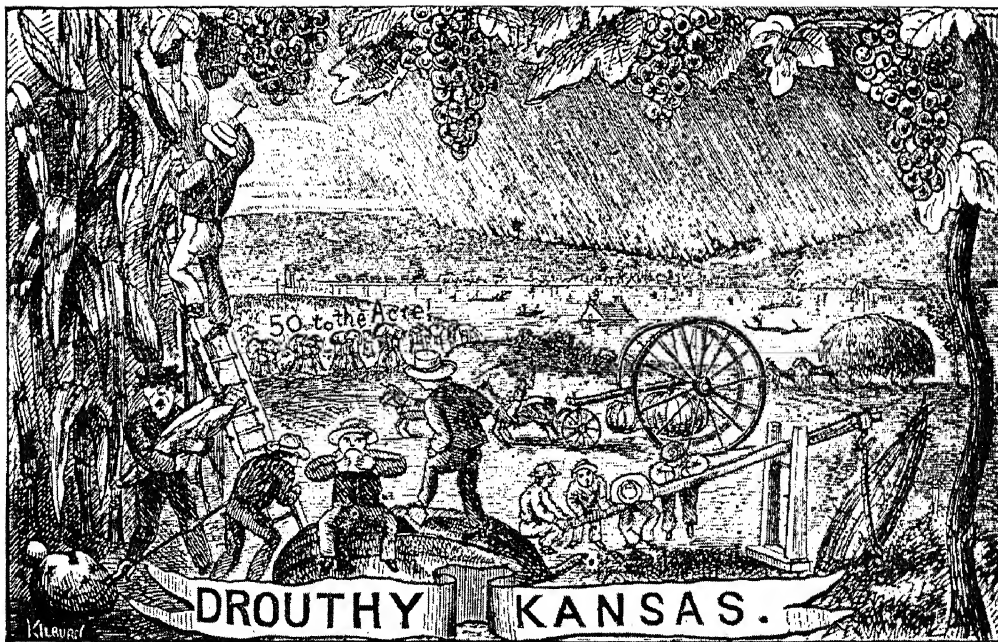


From "Nebraska," by J. D. Butler, 1873

tained agents abroad, who spread stories of the lushness of Burlington lands and of the sure success that awaited there a man unafraid of work, to such excellent effect that sometimes whole congregations and villages moved en bloc. Most immigrants embarked on the stripped-down sleeping coaches made for the purpose and began the final lap of their long journey to the prairies. In Nebraska foreign-born citizens made up nearly 20 per cent of the state's increase in population in the decades of the 70's and 80's, an increase of almost a million souls. The railroad took responsibility, in many cases direct responsibility, for peopling the new West.

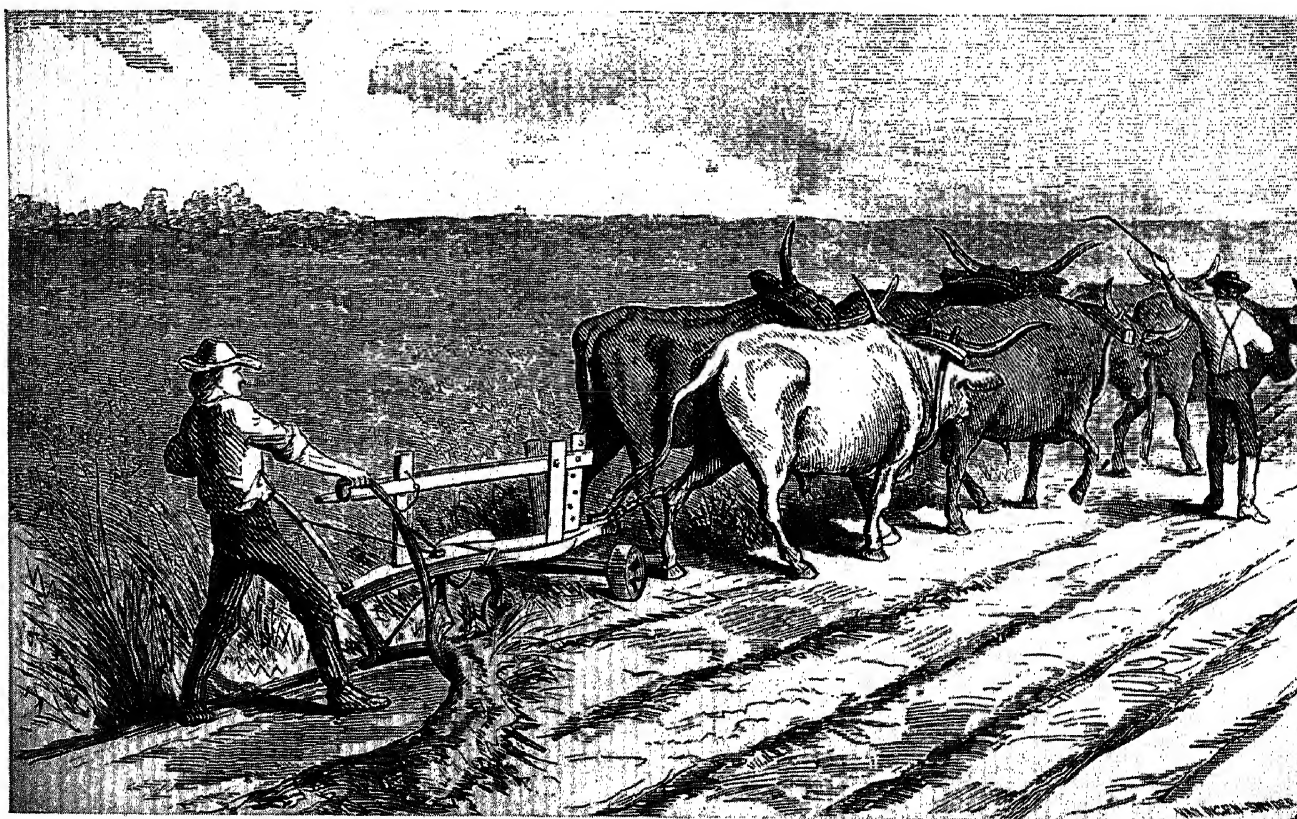


From "Harper's Weekly," November 3, 1886

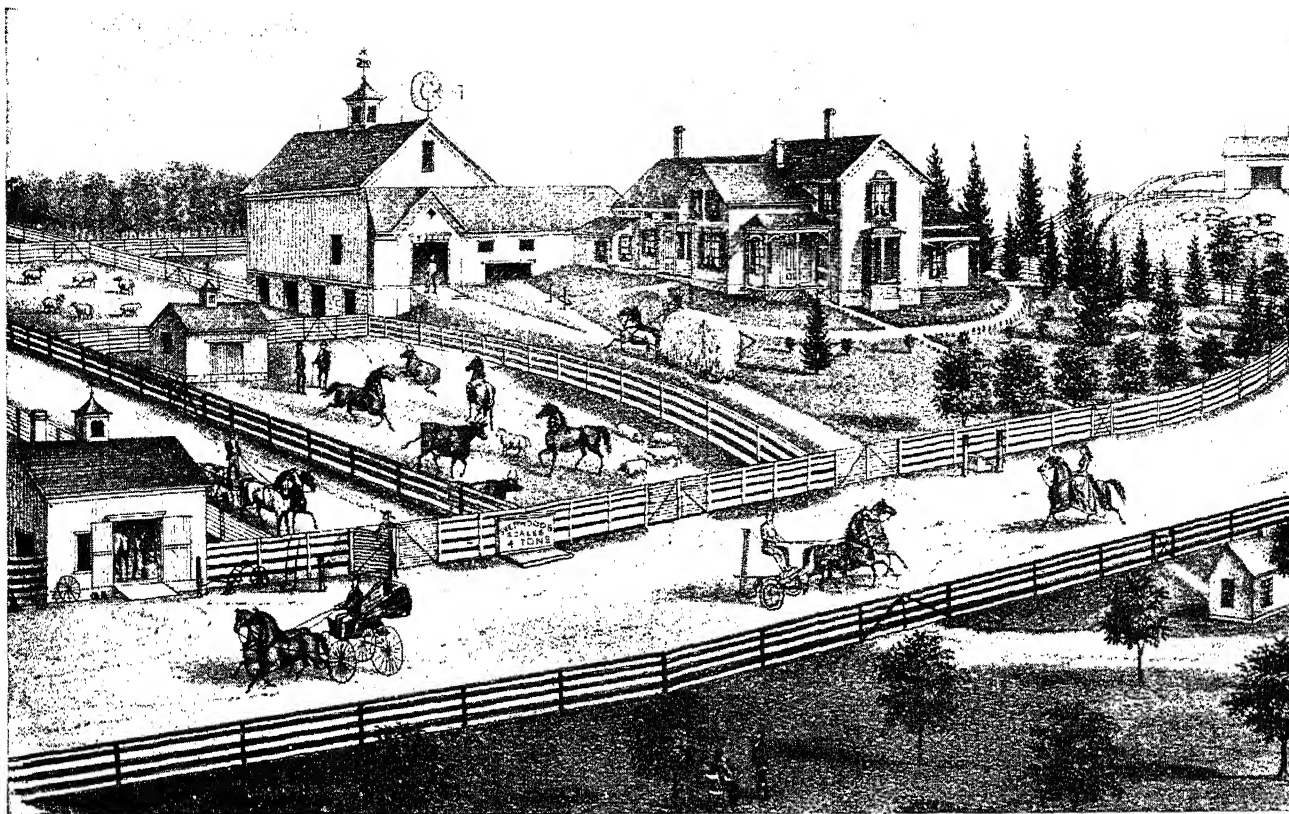


From "Resources of Kansas," by C. C. Hutchinson, Topeka, 1871

Granted 2,382,208 acres in Nebraska, the Burlington offered reduced transportation and temporary lodging in Immigrant Homes at depots to persons who promised to buy land. "Set out walking sticks and in a dozen years your out-stretched arms cannot encircle one of them," read one of its circulars, an optimism shared by Kansas boosters (*above*). Counter propaganda from political dissenters pictured (*below*) the labor necessary "to raise Iowa corn at 16 cents a bushel." Many farmers, afloat on the rainbow of promise, did go so deeply into debt to buy the steel plows necessary to cut the heavy sod and the reapers to cut the wheat that when prices fell, as in the panic of '73, they lost implements and the farm itself.

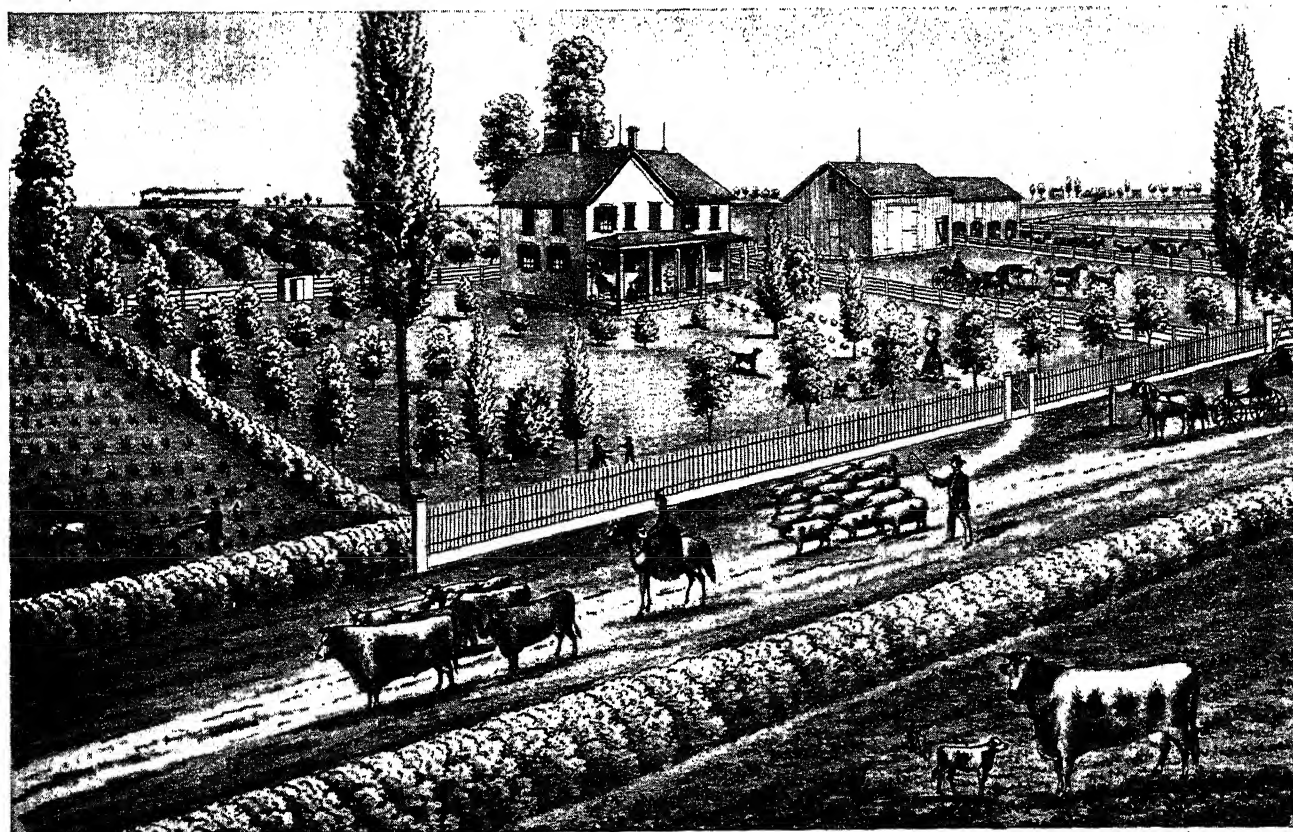


From "History of the Grange Movement," by J. D. McCabe, Philadelphia, 1873



From "Atlas Map of Kane County, Illinois," Geneva, Illinois, 1872

Subscribers to county histories in the 1870's, 80's and 90's, such as the Gordon Brothers of Kane County, Illinois (*above*), and Cornelius Ackerman of Fulton County, Illinois (*below*), were guaranteed complimentary drawings in which prosperity shrieked and all horses were only too eager to trot uphill with the heaviest of loads. Behind the stylish glories of Mr. Ackerman's estate, a Burlington train races toward Galesburg.



From "Atlas Map of Fulton County, Illinois," Davenport, 1871



Courtesy Nebraska State Historical Society

The poignant pictures on this and the following pages, which suggest better than any words the hardships and the pride and the courage of the pioneers who settled the Nebraska plains, were selected from over fifteen hundred photographs taken in Custer County between 1886 and 1903 by Solomon D. Butcher, an early settler and photographer whose wagon appears at the left of the picture above. This is the sod-house frontier. To make a sod house a settler cut thickly matted sod with a spade into blocks twelve by thirty-six inches, and laid them in three's, making sure that the joints of each tier were staggered, and that every third tier was laid crosswise to provide rigidity. The dirt roof, resting upon a matting of branches, brush and long prairie grass, often in wet weather bloomed with morning-glory and prairie rose.

Each of these pictures has a story of its own to tell. There is no weakness in any of the faces, only a kind of superb and unbreakable arrogance. The women wear their best dresses, the children have been scrubbed, the prized family possessions — a sewing machine, for instance — have been carried out of the house to stand as evidence of respectability and success, and the teams and cattle and farm machinery, the hired men and girls, are lined up as for inspection. Custer County on parade, unbeaten, unbeatable.



Courtesy Nebraska State Historical Society

(Above) Immigrants arriving in Custer County. (Below) Young settler poses with his all — wife, baby, dog, breaking plow, corn plow, wagon and three horses.



Courtesy Nebraska State Historical Society



Courtesy Nebraska State Historical Society

(Above) Seated at home of parishioner are "The Reverend E. Eubank, first Christian preacher in Custer County, and his noble wife." (Below) Using all the farm for crops; plowing corn in dooryard.



Courtesy Nebraska State Historical Society



Courtesy Nebraska State Historical Society

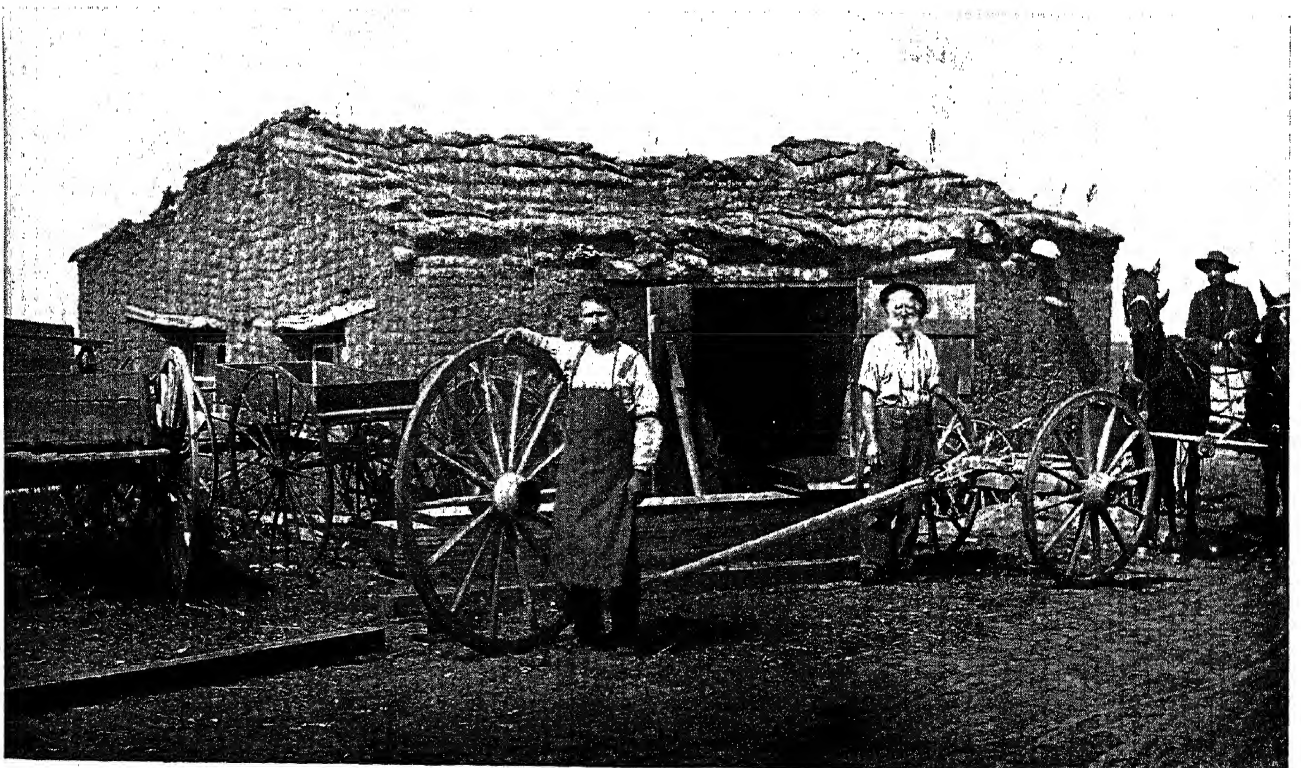


Courtesy Nebraska State Historical Society

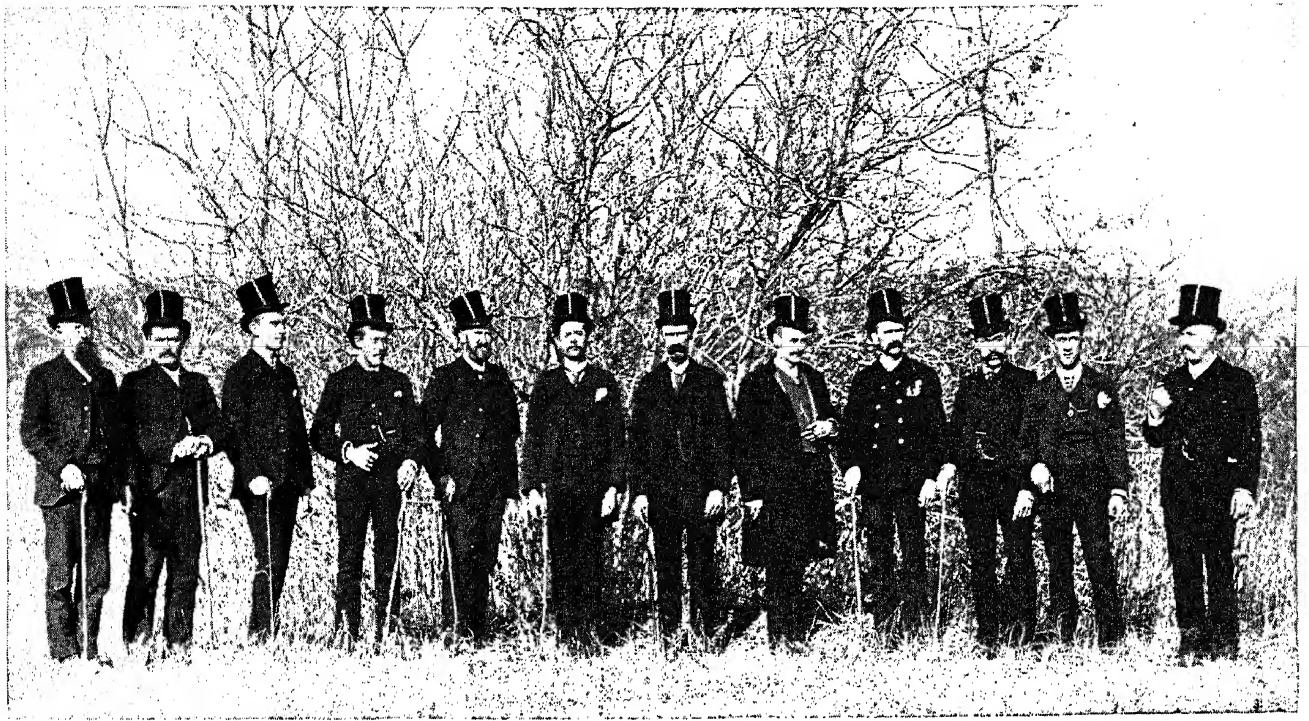


Courtesy Nebraska State Historical Society

(Above) Prairie patriarch sits for camera with his Bible, the crayon enlargement of his dead wife's photograph, his cowboy sons, his daughters or daughters-in-law and, at a respectful distance, his hired men. (Below) First blacksmith shop in West Union, Custer County.



Courtesy Nebraska State Historical Society



Courtesy Nebraska State Historical Society

(Above) Democrats at Mason City, Nebraska, 1887. (Below) "Font" Sharp, his family, his livestock, his old sod house (lower right) and his new frame house on the hill, south of Broken Bow, 1888.



Courtesy Nebraska State Historical Society



From "Frank Leslie's Illustrated Newspaper," July 4, 1885

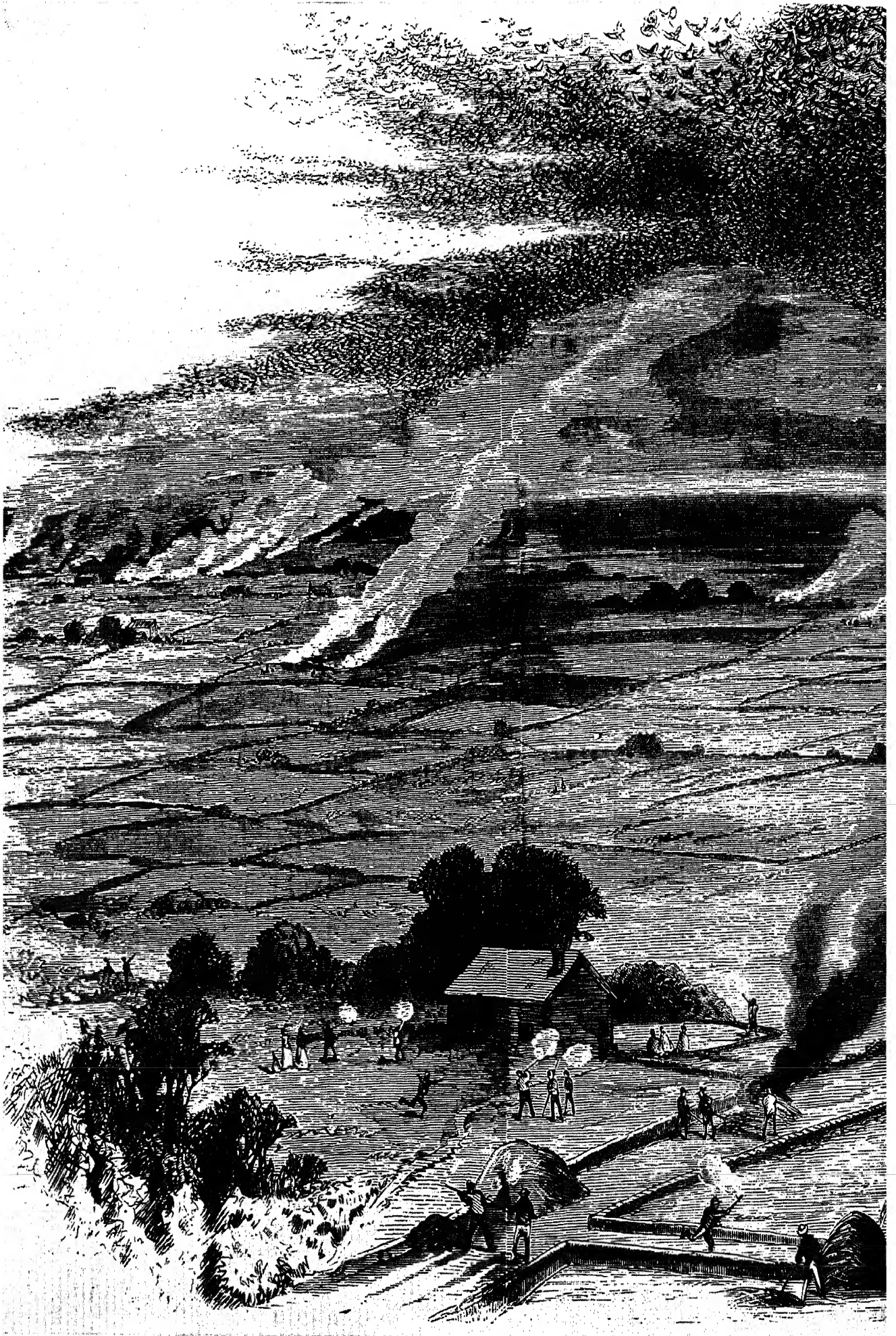
Cyclone cellar in Iowa.

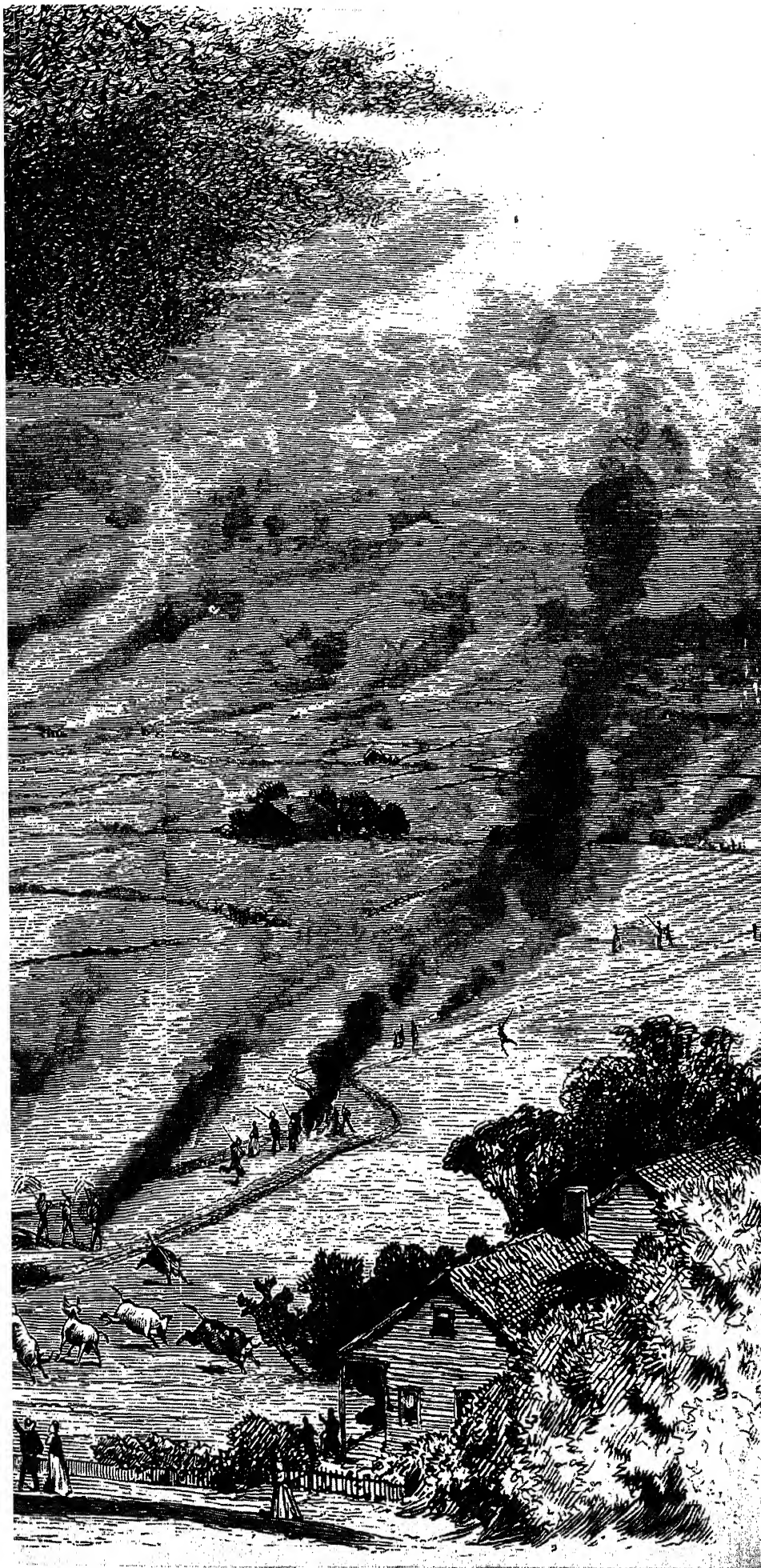


Settlers on the Plains had to keep cyclone cellars (*opposite page*); their schools were remote (*above*), teachers' salaries in 1882 averaging \$139 per year in Iowa and \$133 in Nebraska; and grasshoppers periodically devoured green crops. (*Below*) Nebraska farmer Swain Finch shows how he met the grasshopper horde at the edge of his cornfield in 1876 and fought a losing battle.

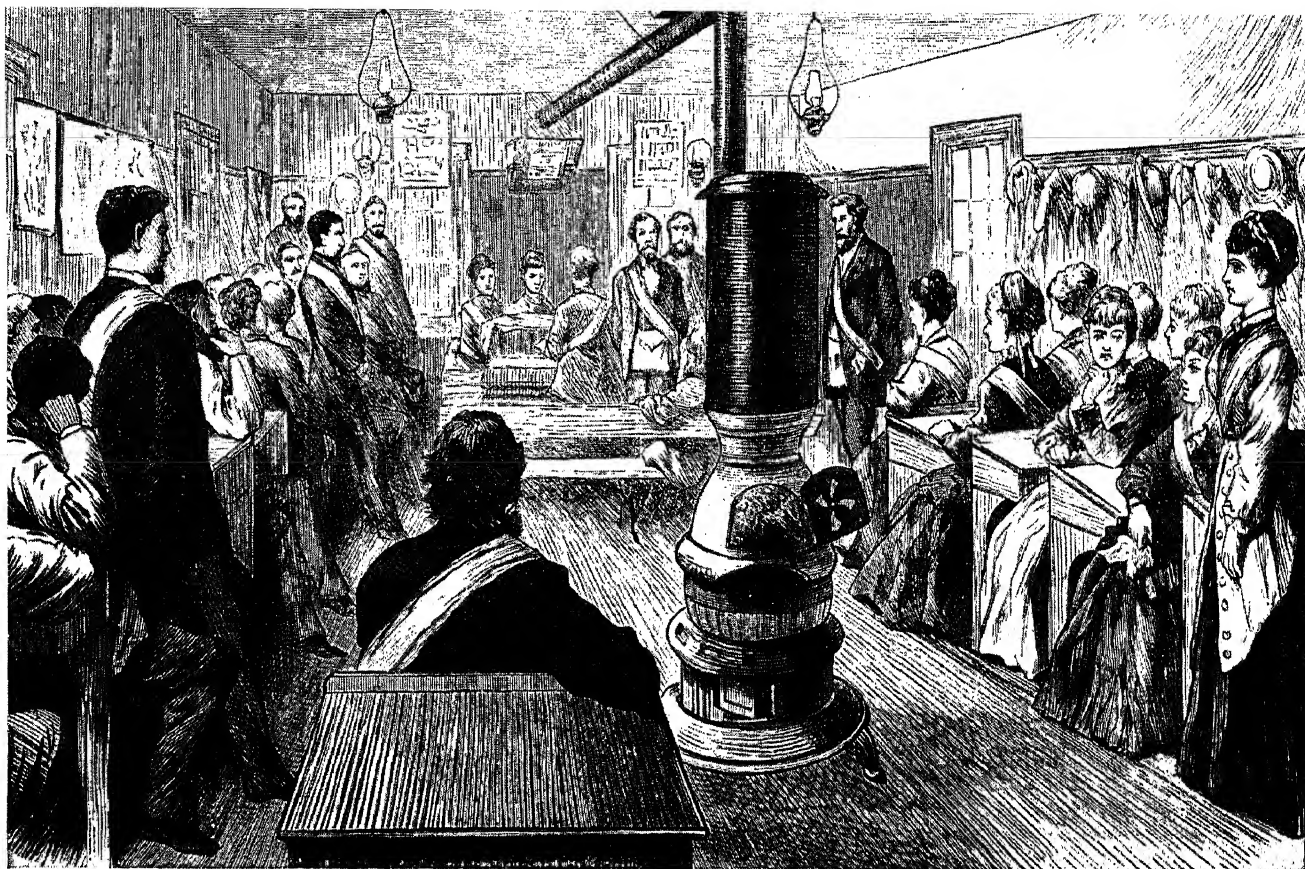


Courtesy Nebraska State Historical Society



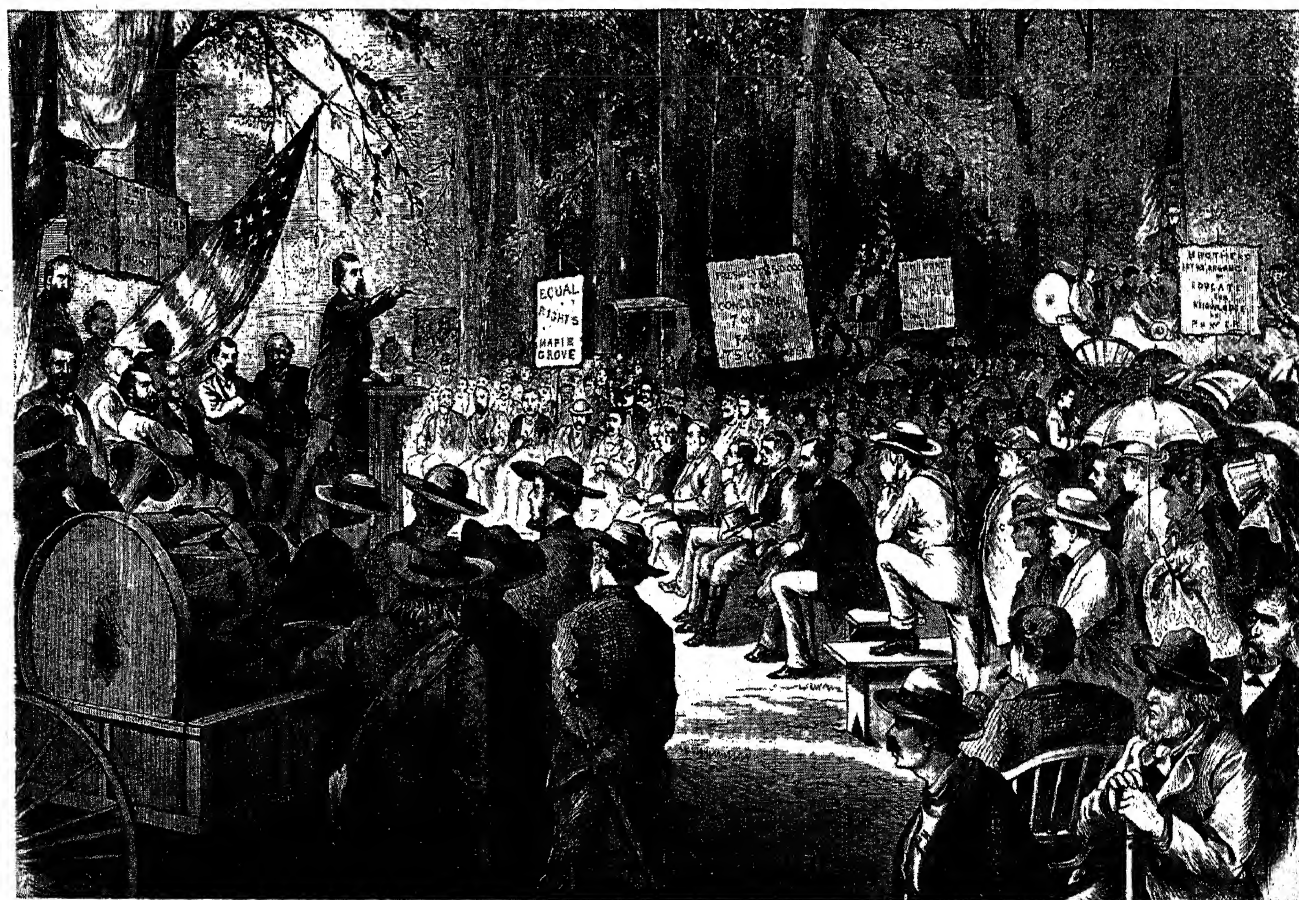


A Minnesota device for repelling the grasshoppers during the great invasion of 1874. When the approaching insect horde loomed dark on the horizon farmers set fire to piles of straw that had been covered with green grass. The clouds of smoke and the clouds of grasshoppers met in the sky, and the insects, "with such a multitudinous hum of wings as to deepen into a roar like distant thunder, fled the country." Similar success was not common, and vast damage was done to grain during the 1870's in Minnesota, Iowa, Kansas, the Dakotas and Nebraska. To lose a crop and see prices soar because of the shortage fanned the farmer's distrust of Wall Street and the "gamblers in the wheat pit" at Chicago.



From "Frank Leslie's Illustrated Newspaper," January 31, 1874

Democratically denouncing corruption in politics and business, the Grangers, assembled in winter in schoolhouse lodge rooms, as in Edwardsville, Illinois (*above*), and in summer in monster mass meetings, began a great reform movement.



From "Frank Leslie's Illustrated Newspaper," August 30, 1873



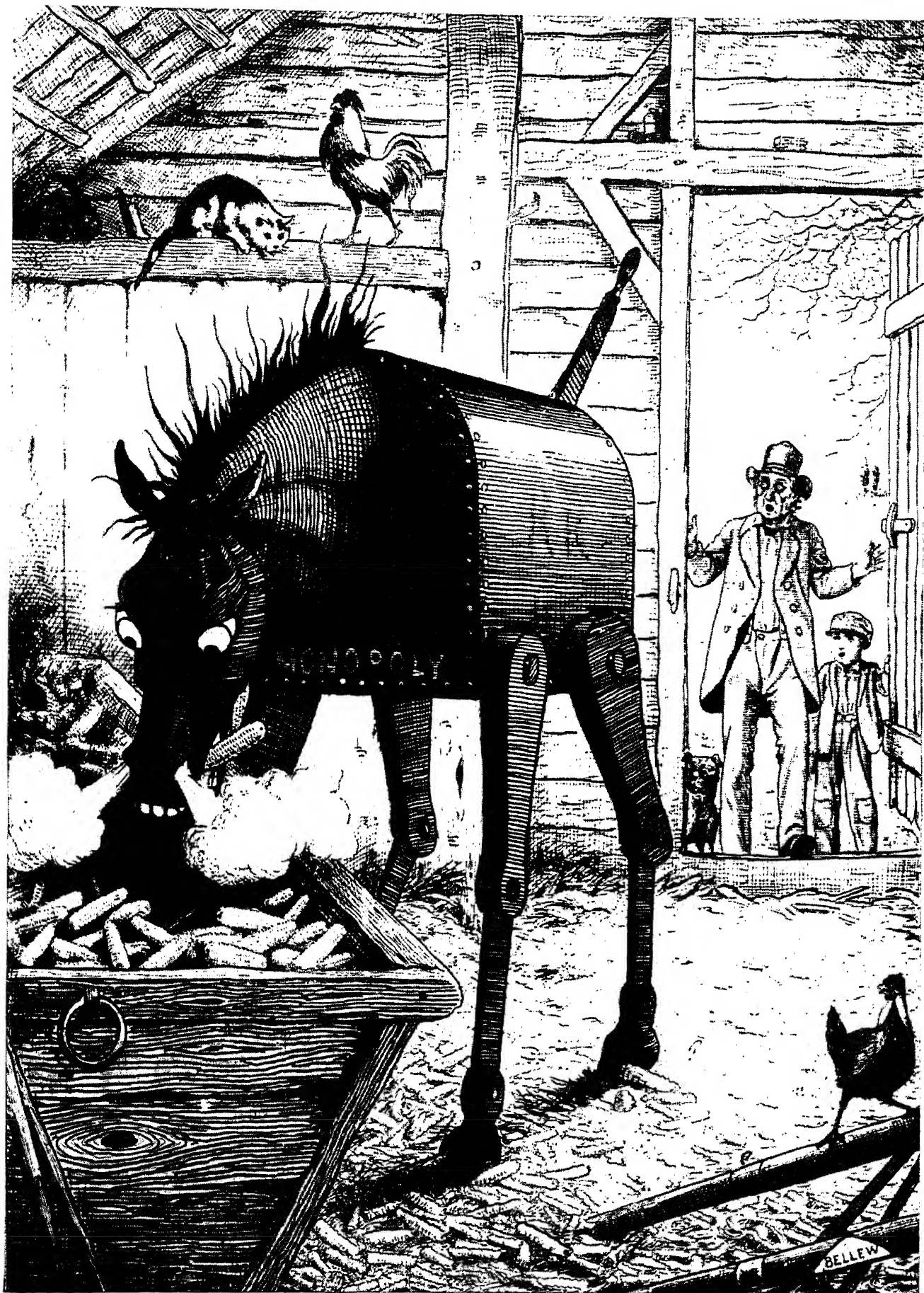
From "History of the Grange Movement," by J. D. McCabe, Philadelphia, 1873

"Evening Recreations of Railroad Gamblers," part of the propaganda issued by the National Grange, which insisted with passionate sincerity that the panic of 1873 had been caused by profligate gambling men in the East who played cards by night in elegantly wanton dens and speculated recklessly with railroad stocks by day. The Grangers charged that the panic had been precipitated by manipulators of railroad securities, and that the railroads had been so rashly financed by presumably respectable investment houses that the whole financial structure of America had been weakened. Although other corporate groups were also accused of victimizing the public, the "railroad gamblers" became the Satans in the national Inferno. Political corruption during the building of the Kansas Pacific Railroad in the 1860's had produced the "Credit Mobilier Scandal," which colored public thinking for two decades. Farmers and small businessmen declared that all the railroads, including the Burlington, should be compelled by law to stop discriminating between shippers of freight, to quit bribing lawmakers and to establish maximum traffic rates. Great popular approval greeted the charge that railroads levied low freight rates when competing with each other on long hauls and high rates for short hauls wherever they had a monopolistic hold upon a local community. Although the roads answered hotly that the short haul was obviously more costly to handle than the long haul, and that railroad management was continually victimized by legislators hungry for bribes, a series of state and federal investigations did eventually prove to the satisfaction of the nation's voters that the railroads must be controlled by Congress. The extent of control remained an unending issue thereafter, but by the time the Granger agitation had evolved into the Populist Party in the mid-1890's, the railroads had yielded to the bankers and the gold standard as the central target for economic reformers.



From the "Daily Graphic," September 16, 1873

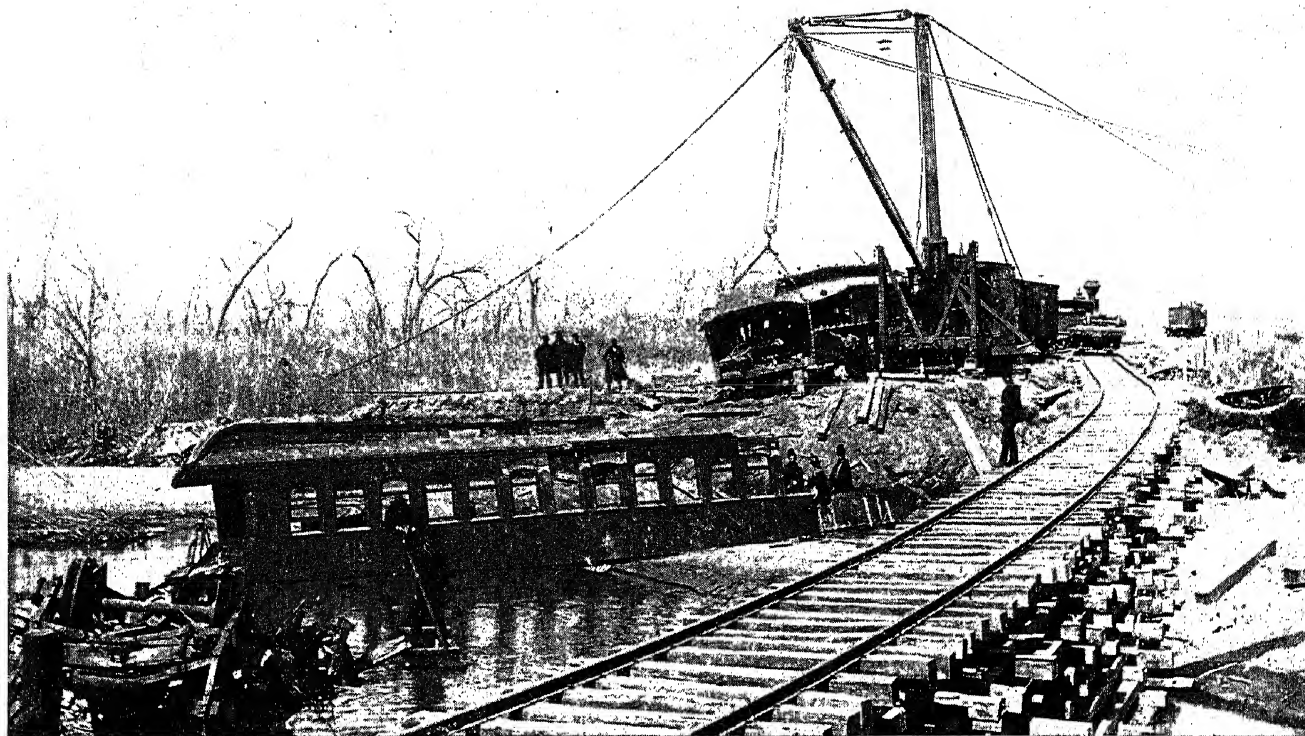
"The Greatest Monopoly of the Age.
The Farmers and the Railroads: The Grange Awakening the Sleepers."



From the "Daily Graphic," April 21, 1873

"The Iron Horse Which Eats Up the Farmer's Produce."

Farmer: "I can't afford this hired team; it takes every mite I can raise to feed him."



In the post-Civil War era when corporations were booming wildly, and when the air was filled with demands for more expansion and less corruption, railroad wrecks were often attributed to management's "the public be damned" policy. In reality responsible roads labored to prevent these expensive catastrophes. Loss of life due to telescoping of wooden coaches, as in a wreck on the Burlington and Missouri near Orleans, Nebraska, in 1888 (*above*), was largely eliminated when all-steel equipment appeared around the turn of the century. Agitation against coal-burning stoves (*below*) continued until steam heating was installed in the early 1900's.



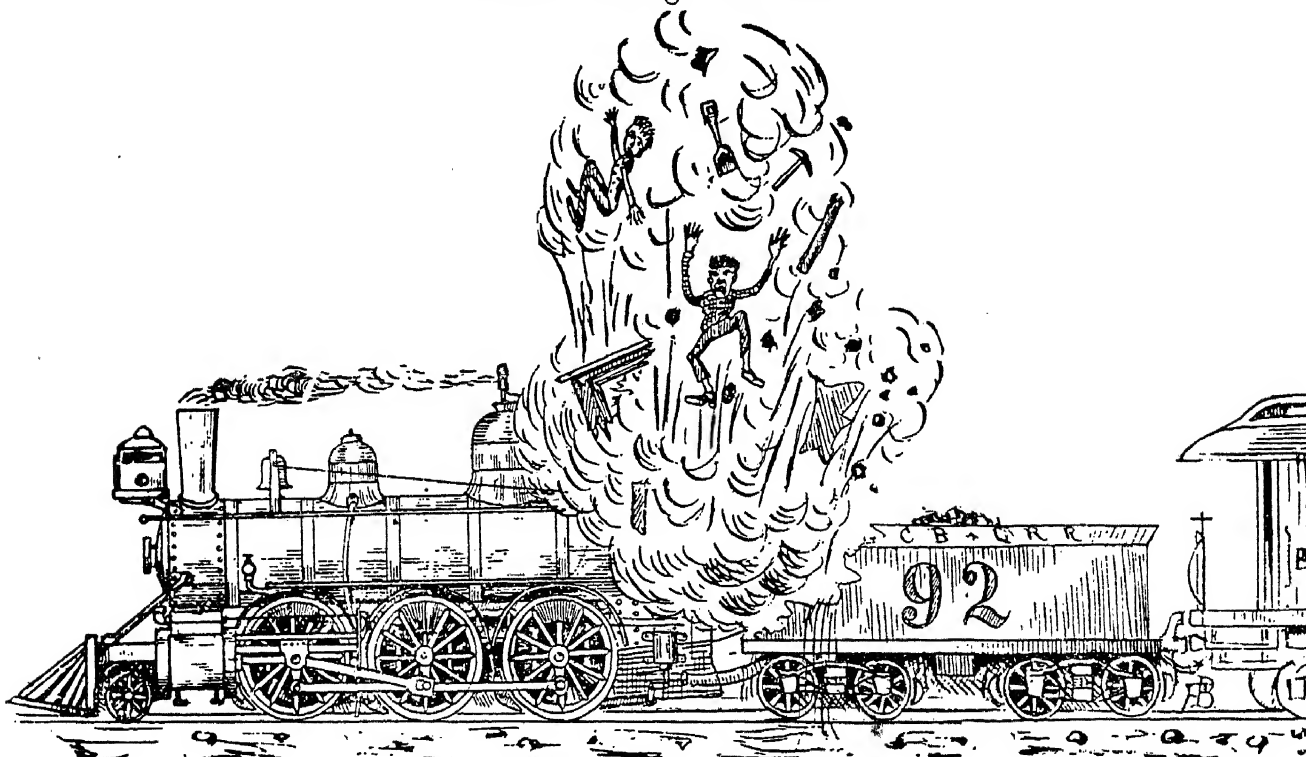
From "Harper's Weekly," February 19, 1887

"The Modern Altar of Sacrifice — the Devouring Car Stove."

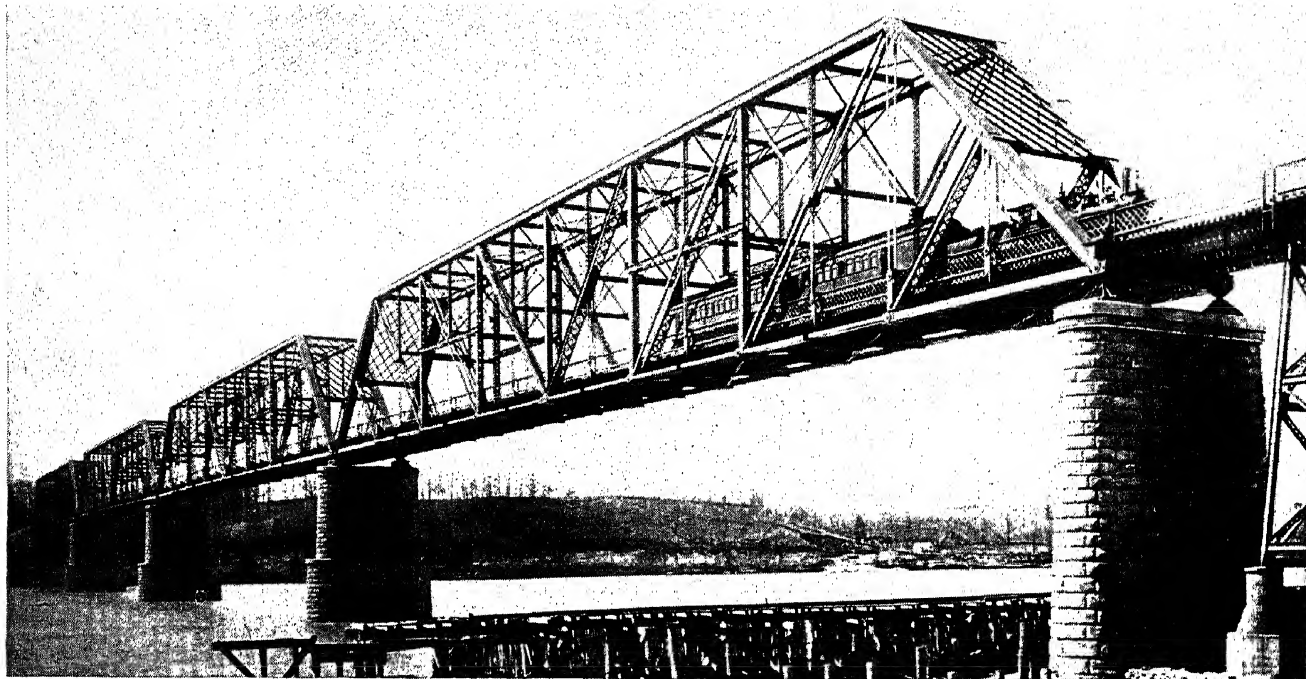


From "The History of the Last Quarter-Century in the United States," by E. B. Andrews, New York, 1896

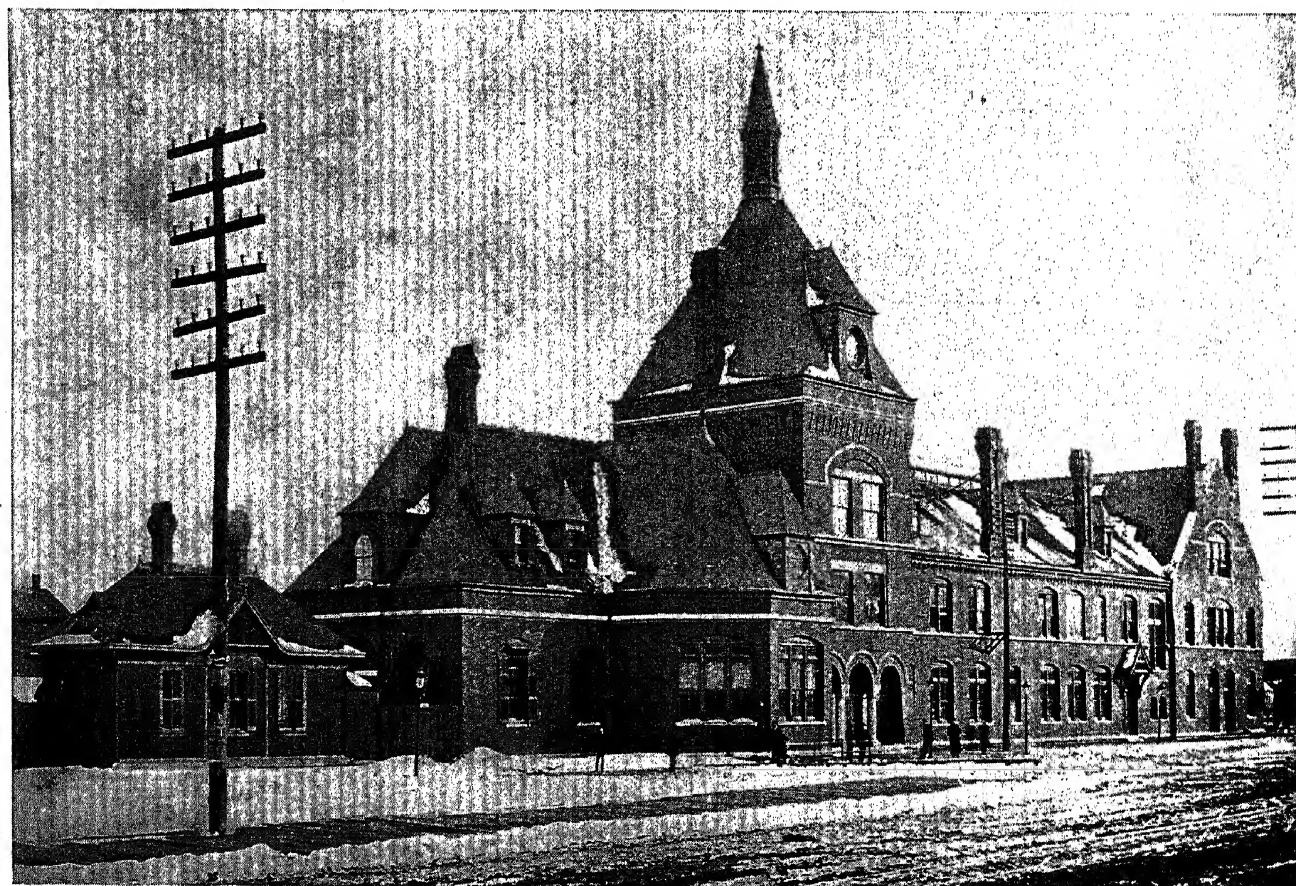
Labor troubles on the railroads reached a climax in 1877 when in a general strike \$5,000,000 worth of property was destroyed before federal troops arrived. The Burlington, while less involved than the Eastern lines, saw the police fight a mob of strikers and strike sympathizers in its Chicago roundhouse, with three persons dying and seven being injured. The Burlington's chief difficulty came in 1888, when its locomotive engineers left their cabs, demanding better working conditions and higher pay. They declared in statements and in cartoons that the road's use of "scab labor" was responsible for such disasters as the explosion below, where strikebreakers ran an engine without water. Strikers burned equipment in the Hawthorne yards of the C B & Q in Chicago, and along the whole system violence flared. Although 2000 cars were demolished and miles of track uprooted, loss of life was far less than in the '77 strike, and only a fourth as much damage was done.

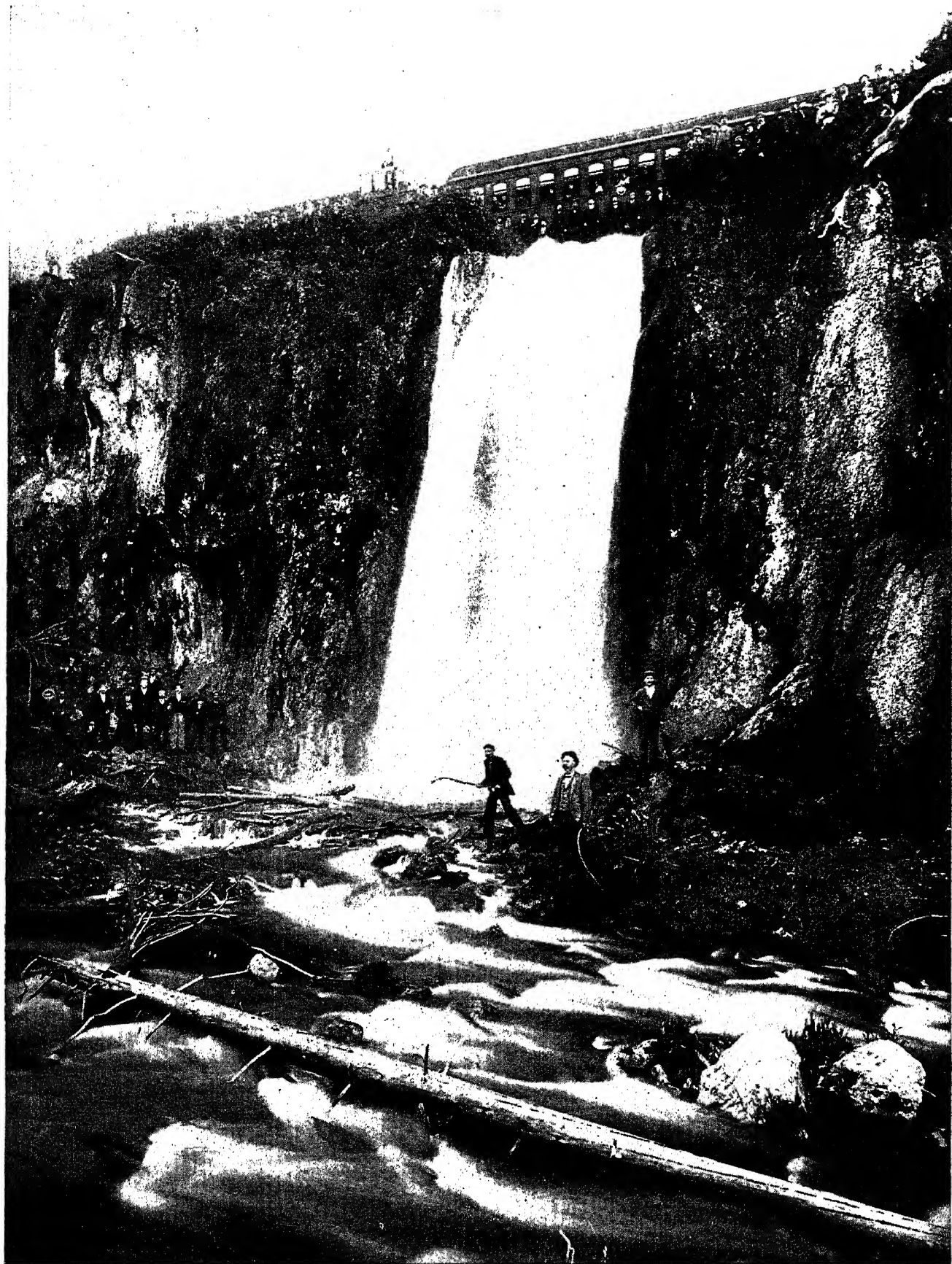


From "The Burlington Strike," by C. H. Salmons, Aurora, 1889

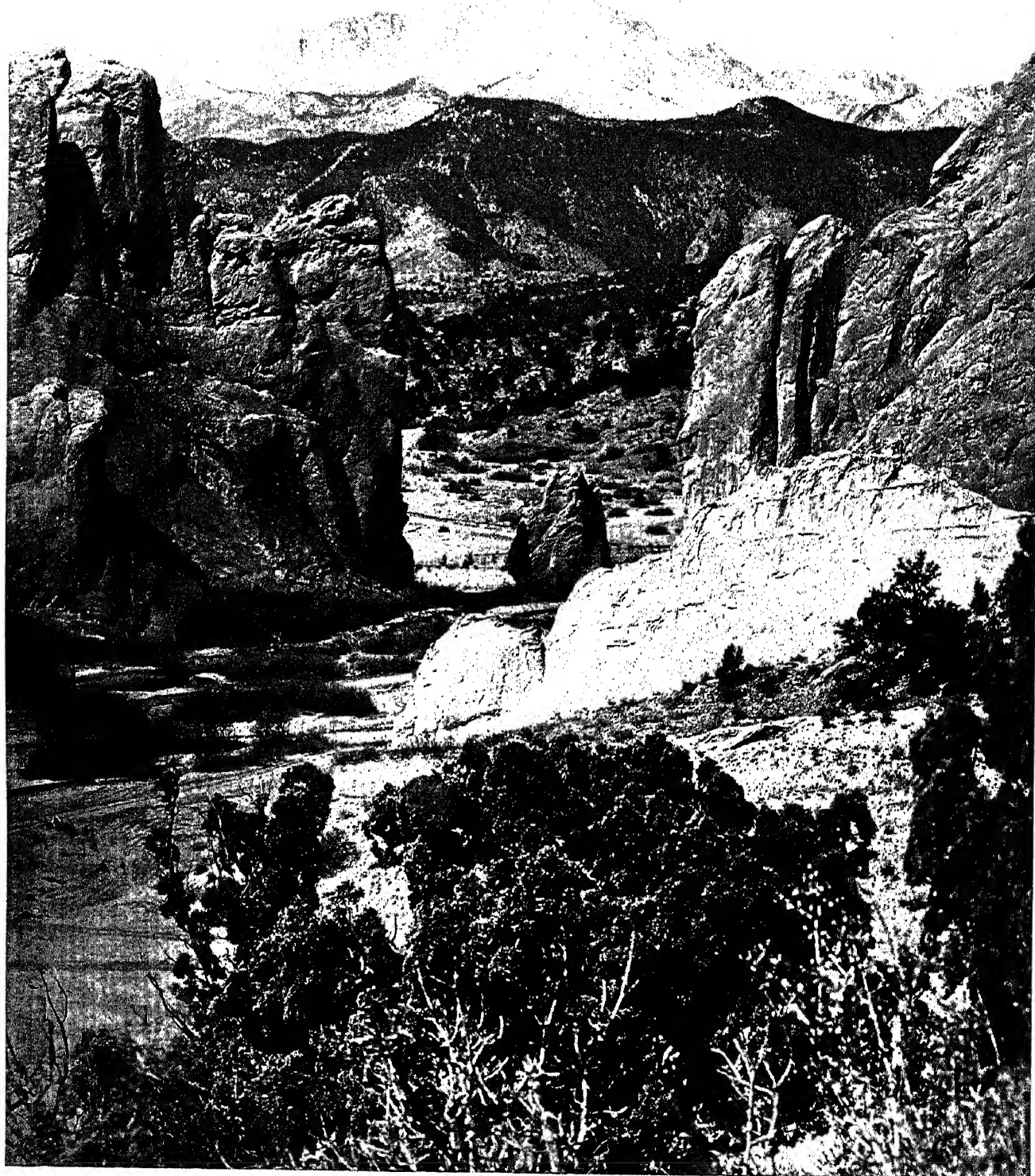


Bridges like that above, across the Missouri just above its confluence with the Mississippi, and stations like that below, at Burlington, Iowa, were the Burlington's pride in the early 1890's as pleasure travel became an increasing part of passenger traffic. By the end of the century the Burlington had seen population in its territory increase from a scant 8,000,000 in 1870 to more than 17,000,000; the value of farm land and buildings swell from \$2,000,000,000 to \$10,000,000,000; livestock jump from \$450,000,000 to around \$1,750,000,000; and corn production increase more than 500 per cent.

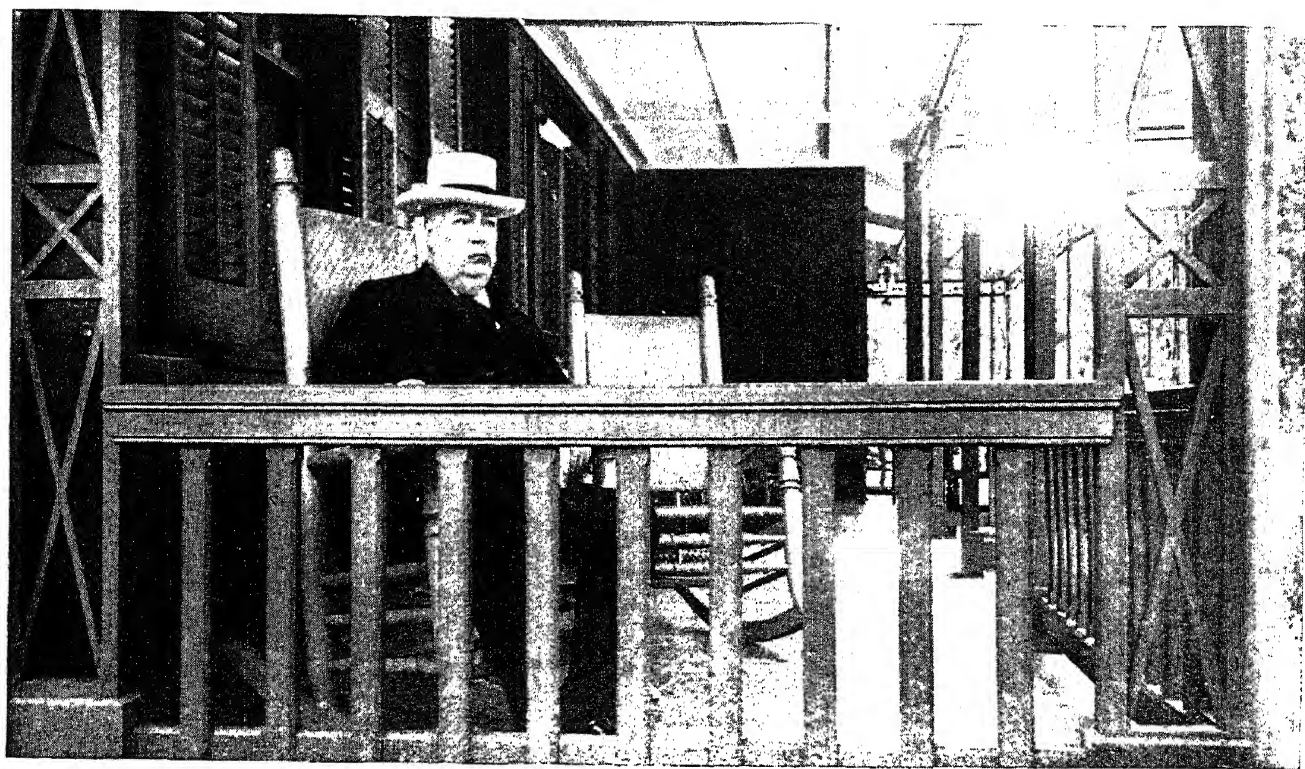




Passenger excursions became profitable to the Burlington in the 1890's as settlers grew increasingly conscious of the scenic beauties of the West. (*Above*) Excursion train, around 1894, at Spearfish Falls, South Dakota, on the Grand Island and Wyoming Central, one of the famous "cat-tail" lines leased by the Burlington in 1886.



As the century ended, passenger receipts showed that the Burlington promotional efforts had helped make Colorado a great vacation and railroad excursion magnet of the trans-Mississippi regions. The famous Garden of the Gods at Colorado Springs was owned and developed as a tourist objective by Charles E. Perkins, President of the Burlington from 1881 to 1901.



Charles Elliott Perkins, photographed in the 1890's (*above*) at his home in Burlington, Iowa, was second only to Forbes in influence upon the Burlington and its progress up to the turn of the century. A cousin of Forbes, and a Burlington employee since he began as a clerk at the age of nineteen, he rose through various executive posts to the presidency of the road when Forbes, at the age of sixty-eight, retired in 1881. "As a railroad builder he was perhaps as great a strategist as any man this country has produced," a rival railroad president once said of him; and his abilities had full play, thanks to the confidence put in him by the Eastern stockholders who controlled the Burlington. As an official on the lines west of the Mississippi for years before assuming the presidency, he had come to know Western problems, and as land commissioner of the lines in Iowa during the Civil War had gone so far as to distribute cottonseed among farmers. Amazingly efficient, rigorously honest, he openly denounced two ideas current in his time: that legitimate money could be made by "sleight-of-hand performance" on the part of capital, and that "the world owes everybody a living." His concept of sound railroading was opposed to the "public be damned" theory in that he demanded that his road secure — and merit — permanent good will from the public, and he was equally opposed to governmental regulation and "paternalistic" concessions to workers on such questions as home owners' loans, insurance, arbitration of disputes, and the like. Unhampered competition and "natural law" would, he insisted, curb the evils of excessive and discriminatory rates. Even those critics who, as "Radicals" in the 1890's, thought his laissez-faire ideas outdated in the Modern Machine Age respected his intelligence, his frankness, his sense of responsibility, and above all his genius in making his road give increasingly efficient service to its patrons. Perkins retired at the age of sixty-one, shortly before the James J. Hill and J. P. Morgan interests jointly purchased the Burlington in 1901.

CHAPTER FIVE. "HEAR THE TRAIN BLOW"

HOW much more glorious will the prairies be when our fences are wire, our fires coal, our roads iron," wrote an Illinois settler to the *Prairie Farmer* in 1848. Forty years later this wish had come true on the Midland prairies and Western plains. The railroad had broken the isolation of the farmer, bringing him the fruits of industrial progress and the conveniences of urban, mechanical "civilization." It had made him a systematic feeder of livestock rather than a drover, a quick fatterer of lean steers, in from the range, a shipper of grain overseas, a seller of cream and butter, a buyer of farm machinery. Where his fireplace had burned hand-cut wood, a big base-burner now glowed with coal. The railroad had tied him to the Machine Age. Already half-mechanized as the century ended, his life was closer to that of the businessman than to the handicraft ways of his backwoods grandfather. Against this new farming was to be set the death of the old belief that isolation was good for farmers, that the simple yeoman, living apart from the vanities of the wicked city, was superior in virtue, more honest than the tradesman, less selfish than the banker, more independent than the factory worker. But the ancient tradition was being ground beneath the wheels of the railroad, and the progressive farmer was too busy to give way to any poetic nostalgia. The farmer might complain at times that laws forced him to buy machinery, clothing, buggies, and such on a protected market while he sold his wheat on a world market, and he might rise in political protest now and then, but no longer did he organize against the railroads. They were a part of that system which, in spite of its irritations, he liked and under which he had progressed in wealth and comfort far beyond agriculturalists in foreign lands.

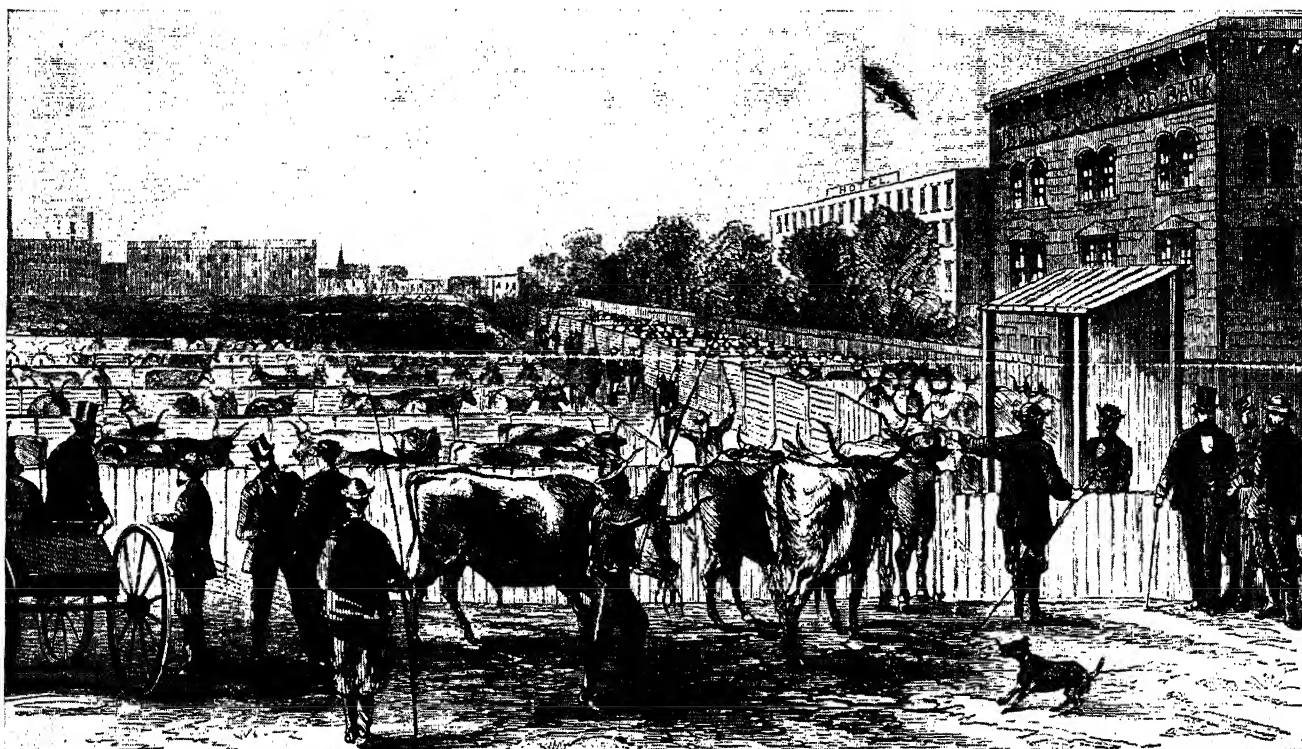
One particular fault he now found with the railroad — those train whistles that came across the fields in the twilight made his sons feel lonesome among the crickets and the frogs; they called his sons to the big, new cities where lights were bright and crowds thick. Folk songs of the plains and prairies repeated plaintively:

Down in the meadow,
Meadow so low;
Late in the evening,
Hear the train blow.



From "Harper's Weekly," October 31, 1868

The drawing above, showing farmers driving hogs, as the sign proclaims, "118 Miles to Chicago," reveals on the horizon the arrival of the railroads which ended this old, slow and expensive system of bringing stock to market. It was the railroads which boomed the Union Stockyards (*below*) in Chicago from a small beginning during the Civil War to a gigantic institution in the 1870's, with the attendant rise of the world-famous "Chicago packers." The railroads, removing the necessity of driving hogs to market, encouraged farmers to switch from the long, lean, tall, slab-sided porker which subsisted partially, at least, on prairie roots and forest nuts, to the more profitable heavy-bodied, short-legged breeds.



From "Harper's Weekly," October 31, 1868



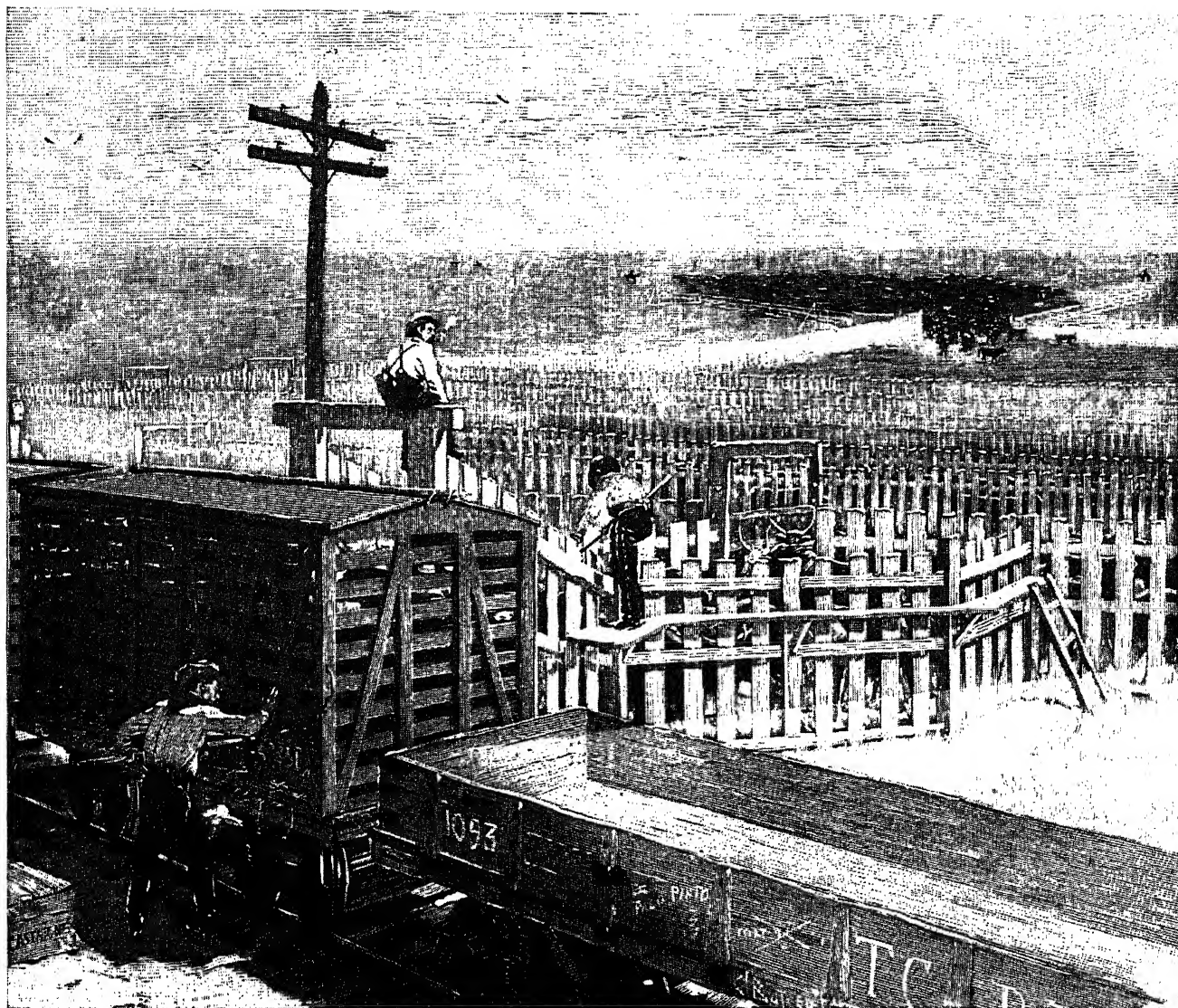
From "Frank Leslie's Illustrated Newspaper," October 12, 1878

It was the Burlington which brought in the first trainload of livestock when the Chicago Stockyards opened their doors, so memorably, on December 26, 1865. The crudity of slaughterhouse methods in the packing houses which clustered around the yards was celebrated, as shown above, but it gave way rapidly in the 80's to more scientific devices as the need for speed and greater volume increased. In the early 70's canned meat began to pour out of the packing plants, and in 1877 the introduction of the refrigerator railroad car by Gustavus Swift enabled the railways to transport enormous quantities of chilled meat. Small packing plants along railways in the Granger country grew in size, like those in Keokuk, Iowa, on the Burlington, below. All Atlantic steamships were, by 1880, equipped with cold storage plants, and the shipments of American meat to England boomed sensationallly.

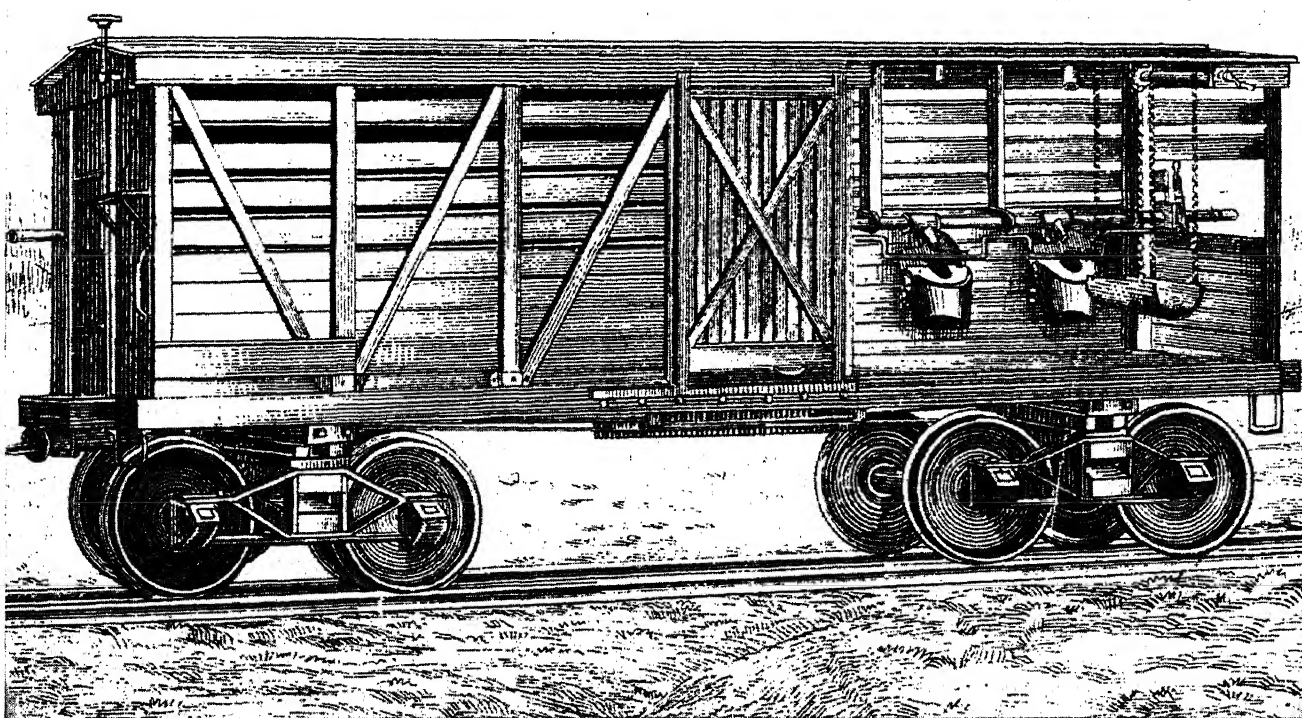
By the end of the 1870's the railroads had greatly improved their delivery of livestock to the packers. In the drawing on the opposite page, a section of the interior of a cattle car is exposed to show the water buckets and hanging hayracks by which steers were fed in transit. In the Granger states, served by the Burlington, the value of livestock on farms and ranches increased from some \$220,000,000 in 1860 to \$850,000,000 in 1880 and \$1,200,000,000 in 1890.



From "An Illustrated Historical Atlas of Lee County, Iowa," by A. T. Andreas, Chicago, 1874



Drawn by André Castaigne for "Cattle Trails of the Prairies," by Charles Moreau Harger, "Scribner's Monthly," June 1892



From Seymour Dunbar Collection. Museum of Science and Industry, Chicago

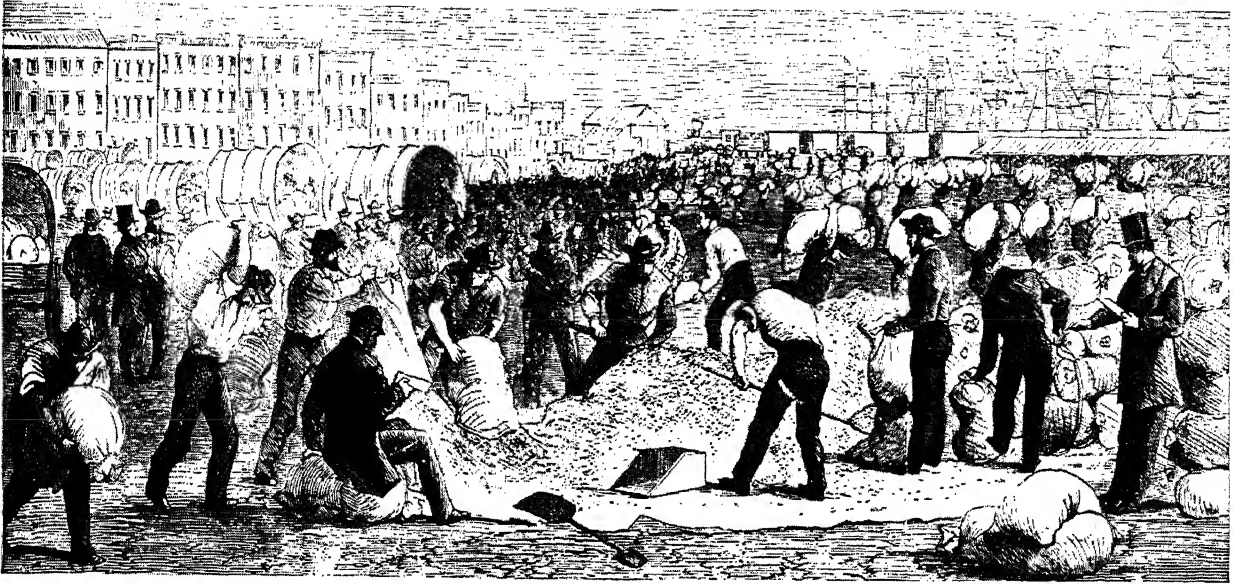


Drawn by André Castaigne for "Cattle Trails of the Prairies," by Charles Moreau Harger, "Scribner's Monthly," June 1892

Although it was the daredevil, "hell-for-leather" aspects of cowboy life that were devoured by the reading world, the workaday routine of the cattlemen was prosaic and the cooking was usually indifferent. The impression of a stampede (*above*) is that of a French artist, while the photograph (*below*) is of a chuck wagon in Morgan County, Colorado, in 1887, five years after the Burlington had arrived, Denver bound.



Courtesy Val Kuska, Omaha, Nebraska



From "Harper's Weekly," October 31, 1868

(Above) Although Chicago was experimenting with grain elevators in the 1850's, cereals in '68 were chiefly bought in the open. The Burlington's first elevator was leased to Armour, Dole & Company in 1860. Chicago's "wheat pit" (below) was alternately denounced as the tool of speculators and praised as the stabilizer, in the long run, of prices.

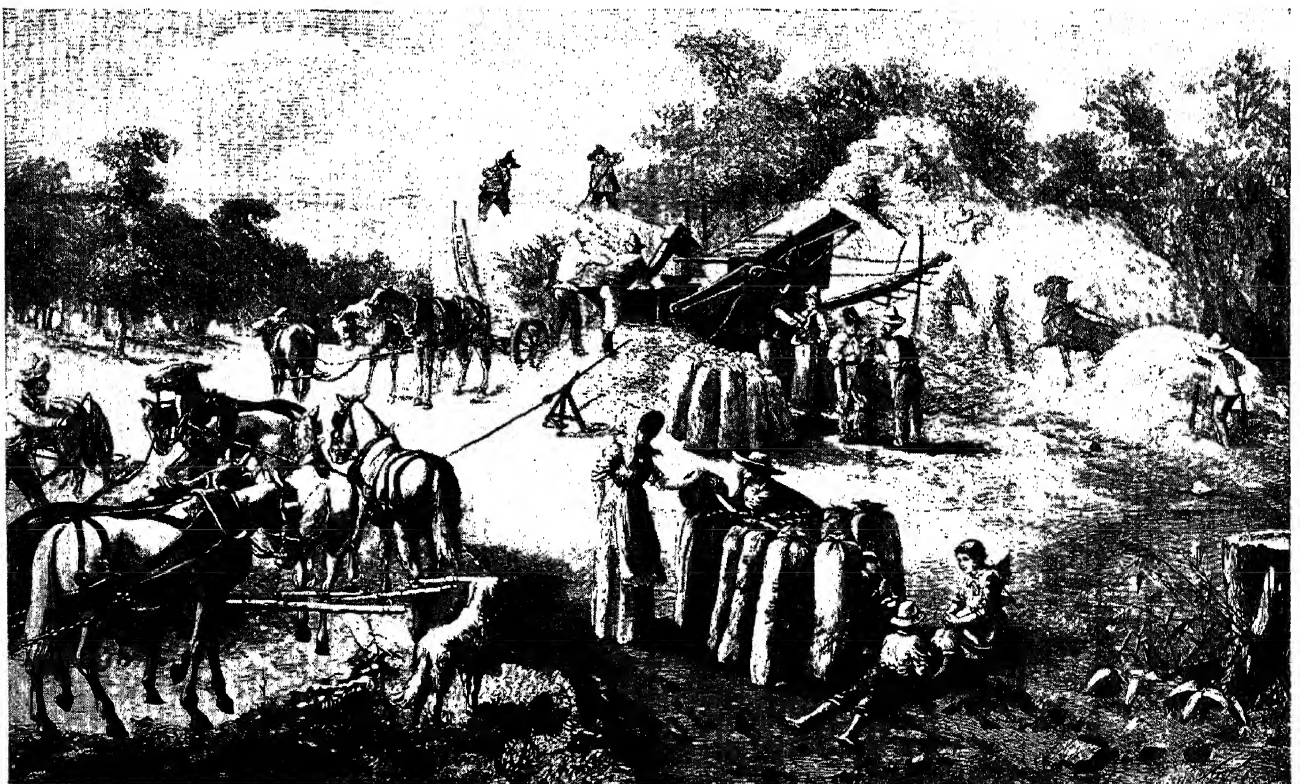


From "The Metropolis of the Prairies," by A. A. Hayes, "Harper's New Monthly Magazine," October 1880

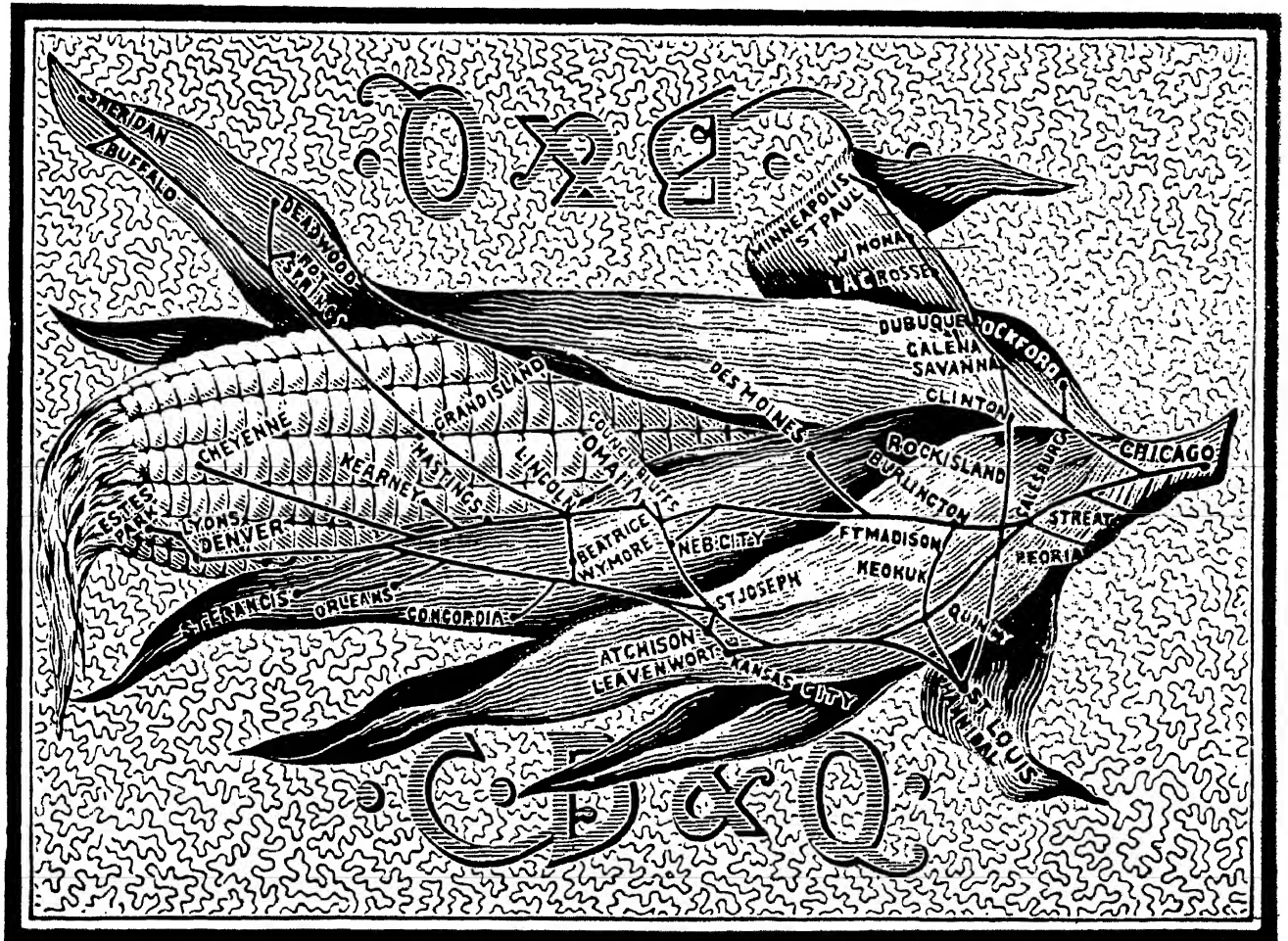
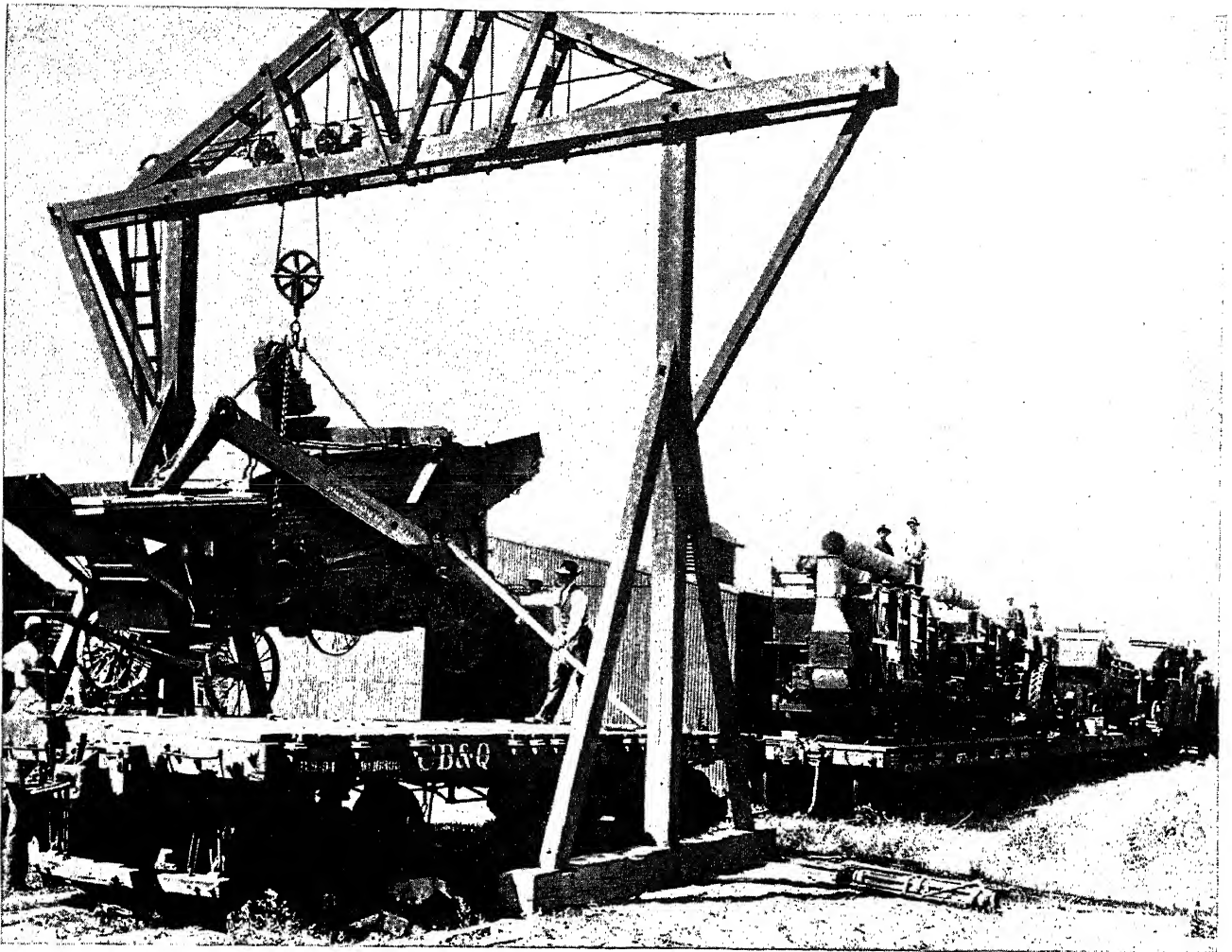


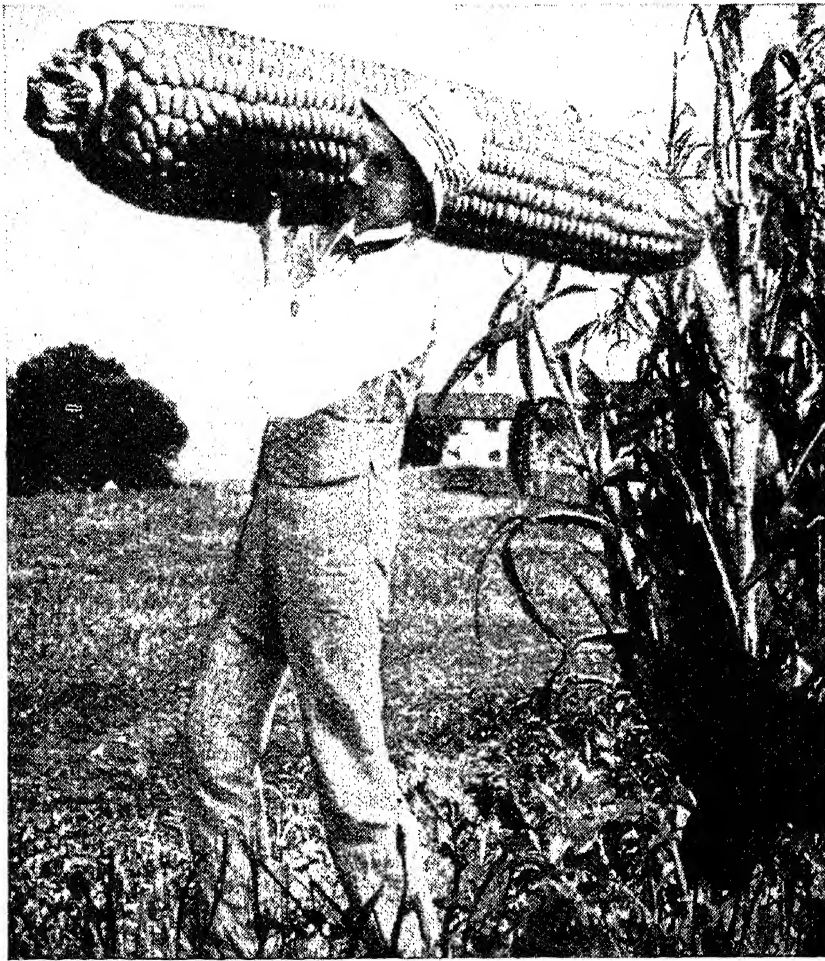
Drawn by W. R. Leigh for "The Business of Wheat Farming" by William Allen White, "Scribner's Monthly," November 1897

(Above) Reaping and shocking wheat in Northwest, 1897. (Below) Wheat threshing, 1878, when horses furnished power and communities made threshing time a festival. (Top, opposite page) Unloading new threshing machines, Holdrege, Nebraska, 1895, when steam engines had replaced horses. (Bottom, opposite page) To advertise its identity with the great corn producing areas of the West, the Burlington issued, around 1891, packs of playing cards with this design on back. Design carried several errors: Orleans should read Oberlin; the line from Denver to Estes Park was never operated by the C B & Q.



From "Harper's Weekly," September 21, 1878





From "Facts about Kansas," St. Louis, 1899

The pioneer American fondness for extravagant humor produced fantastic faked photographs, as that at the left. Grandiose "coal palaces," "hay palaces" and "corn palaces" glorified production. Most famous of these was the corn palace at Sioux City, Iowa, which was rebuilt several times after its advent in 1887. Grains of corn were ingeniously fitted into decorative mosaics over the entire exterior, and the Stars and Stripes, Greek allegories, Longfellow's agricultural poems, the Golden Stairs of Heaven, glowed yellow on walls inside and out. A wax dummy, labeled "Ceres," wore a "silky pale robe made from cornhusks."



Courtesy Public Library, Sioux City, Iowa



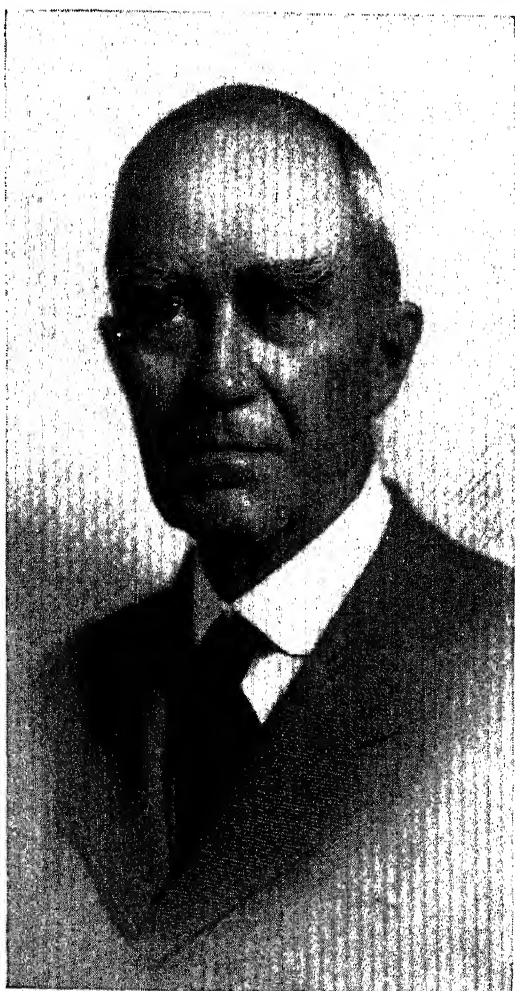
From "The Corn Belt," September 1897

(Above) In 1897 James A. Watts, who poses in his alfalfa field with family and friends, wrote the Burlington from Norton, Kansas: "I came here a poor boy, and I now own a fine 320-acre farm, with grain and stock, all well worth \$5000, and I am only 36 years old. Land has more than doubled in value since the Great Burlington Railroad was built through here, but it is still very cheap to a man who is paying from \$3 to \$6 per acre cash rent in the East, and will double again soon."

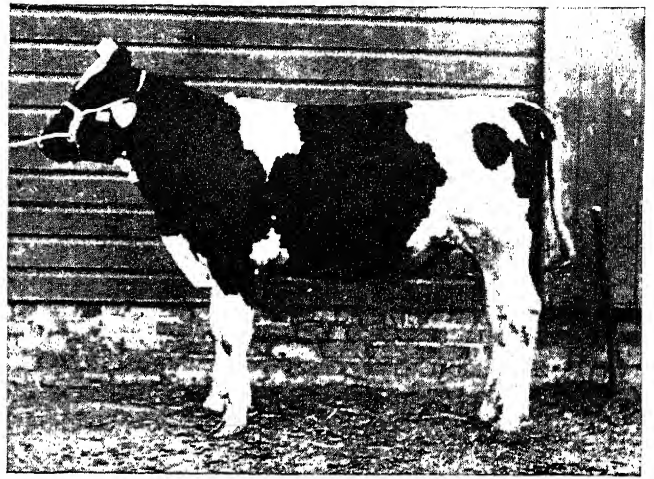
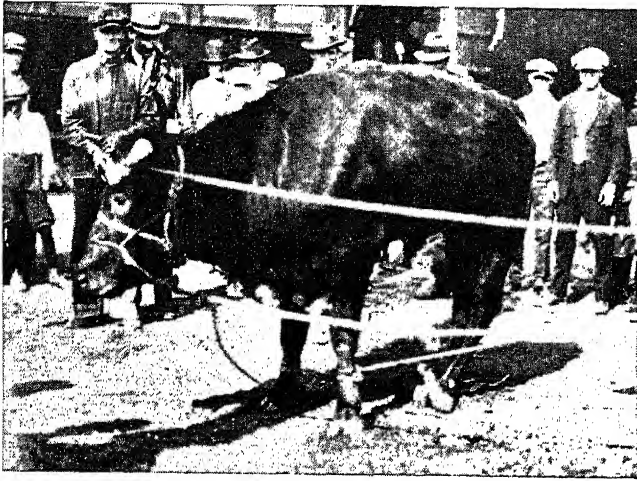
(Below) O. G. VaHue and friends illustrate in early 1900's wonders of Nebraska's highly prized crop, alfalfa.



Courtesy Val Kuska, Omaha, Nebraska



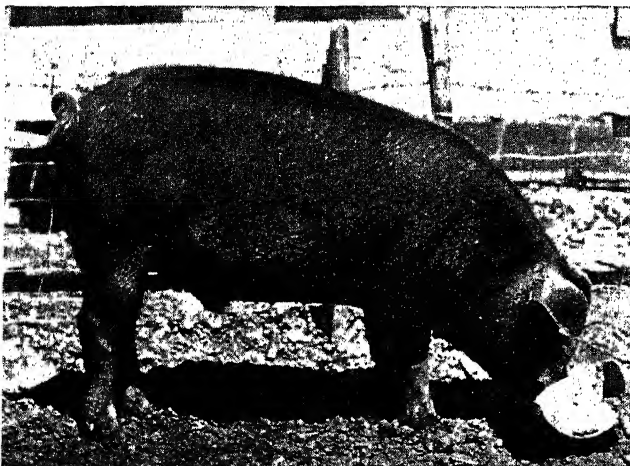
Co-operating with farmers and state agricultural colleges to improve crops and livestock in its territory, the Burlington's land office conducted constant educational campaigns after 1875. New grasses, grains, vegetables, fruits, breeds of animals and poultry, silos, dairy equipment were exhibited by Burlington lecturers in fields, schoolhouses, county and state fairgrounds, halls and special trains. Two kinds of the special trains became particularly famous, those which exchanged, free, purebred bulls and boars for scrub sires (*opposite page*), and those (*above*) which carried the gospel of the new grass, alfalfa, which was singularly adapted to the dry Plains. Alfalfa seed was given away by the road as early as 1875 and when George W. Holdrege (*left*) became General Manager of Lines West in 1884 the drive was intensified. Holdrege in 1903 set aside for experiment and demonstration a half section of land, near the Nebraska town named for him, and was as responsible as any man for Nebraska's eventual position as one of the leading alfalfa producing states. Free transportation to central exhibits was often given farmers.

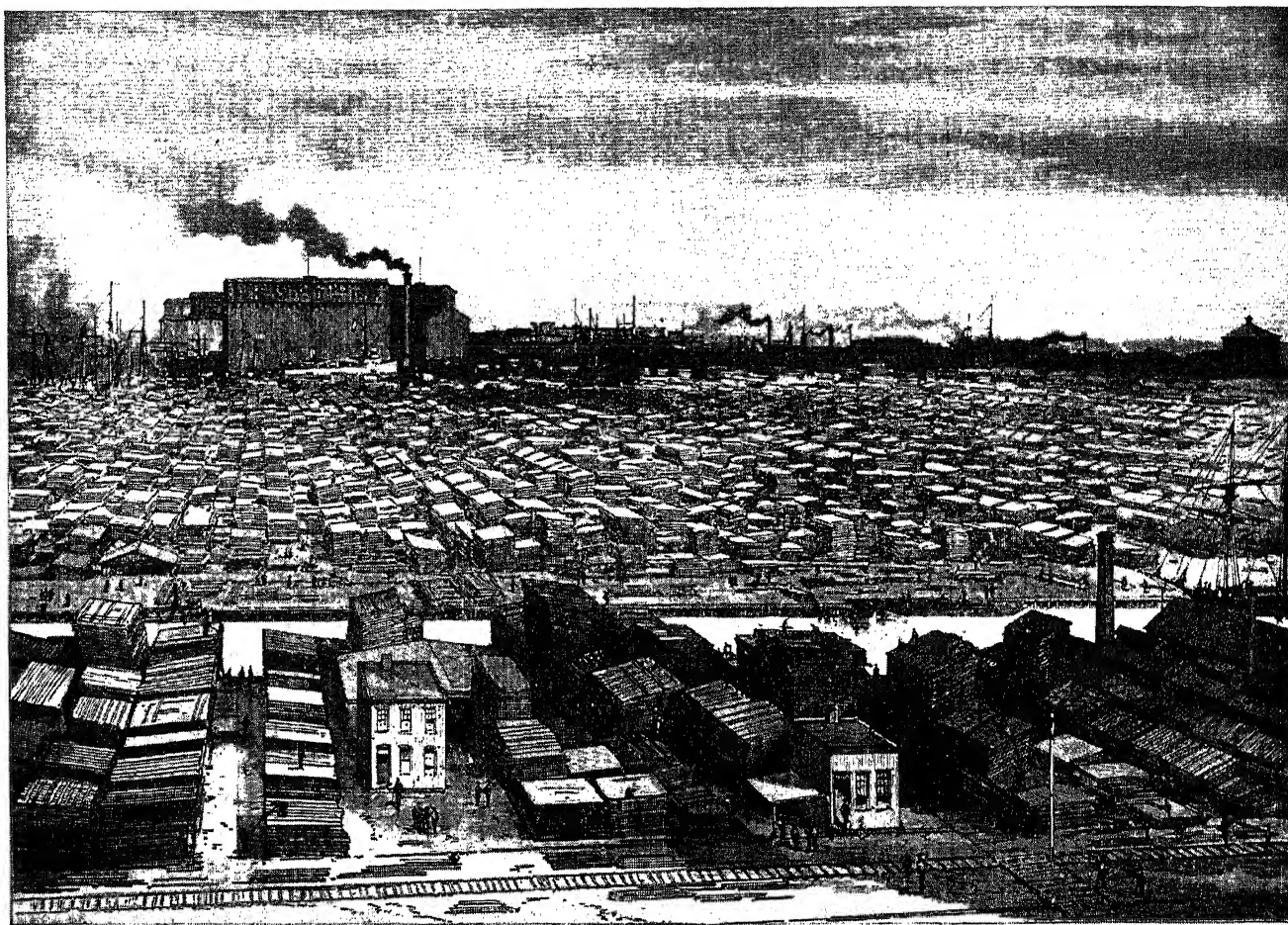


Burlington special "purebred" train at Franklin, Nebraska, October 18, 1924, trades farmers blooded bulls, as at right, for scrub bulls, as at left.



(Above) Crowd of 4000 witness sire exchange at Broken Bow, Nebraska; 71,335 visited exhibits in train at 31 Nebraska stations during 1924 tour. (Below) Purebred boars like that at left were traded for scrub boars of the type at right.

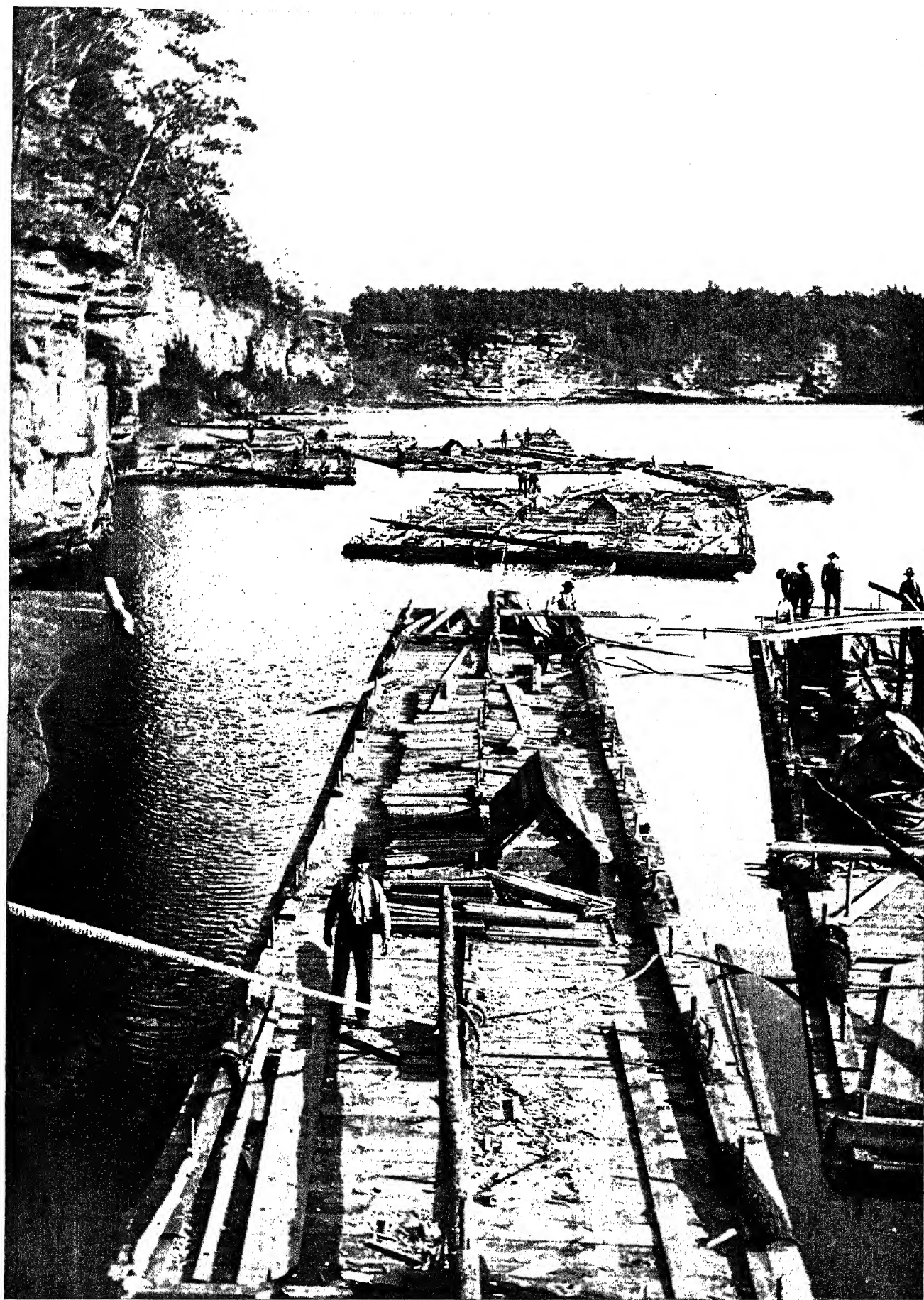




From "Harper's Weekly," October 20, 1883

The lumber district of Chicago was sketched (*above*) from the West Side waterworks in 1883, and a writer described it: "Chicago is now the largest market for forest products in the world. The millionaire in the metropolis and the section hand on one of the new Western railroads both got the material for their homes from her yards. The boards for the farmer's fences and the ties of the road-bed of the railway which bore him to his Western home pass through the hands of the Chicago lumbermen." Lumber for buildings and fences on the treeless Plains streamed west by railroads which picked it up not only from Chicago but from sawmills along the Mississippi River, to which timber was floated downstream from the forests of Wisconsin and Minnesota. The series of logging photographs commencing on the following page was made in the 1880's by H. H. Bennett on the Wisconsin River.

Lumber had been one of the prizes that prompted the Burlington to build to St. Paul in the 1880's and it was lumber, as well as wheat, that was in the mind of the railroad genius James J. Hill when, with the Morgan interests, he purchased the Burlington in 1901. He had pushed his Great Northern through to the Pacific eight years before and had recently become interested in the Northern Pacific, foreseeing among other profits the shipment of lumber to the scantily forested territory served by the Burlington. Under its new ownership the Burlington had permanent connections with the Pacific Northwest for its Midland corn and hogs, its Western beef, and the cotton which came up from Texas, headed for the Orient.



Courtesy Bennett Studios, Wisconsin Dells, Wisconsin

A fleet of at least nine rafts of sawed timber gather at the Dells on the Wisconsin River for the voyage downstream to the Mississippi.

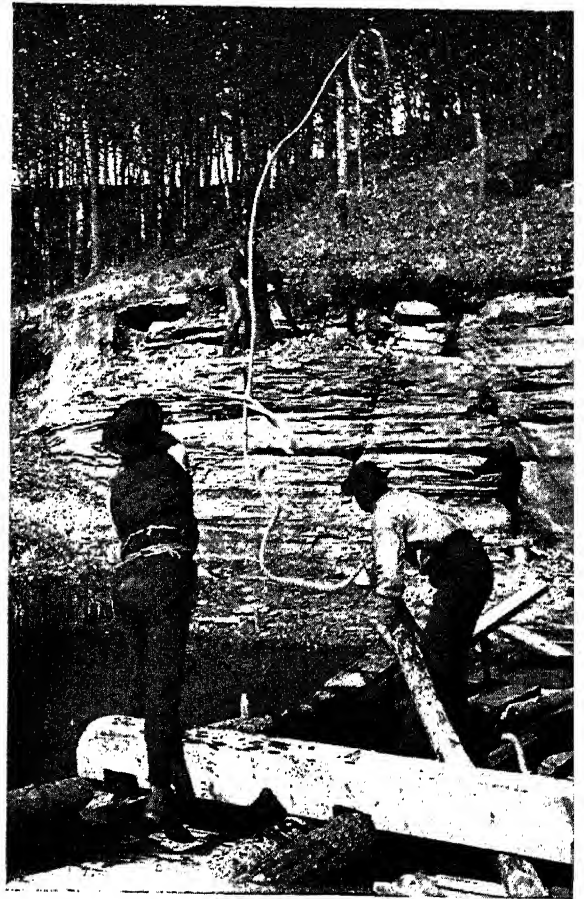


Courtesy Bennett Studios, Wisconsin Dells, Wisconsin

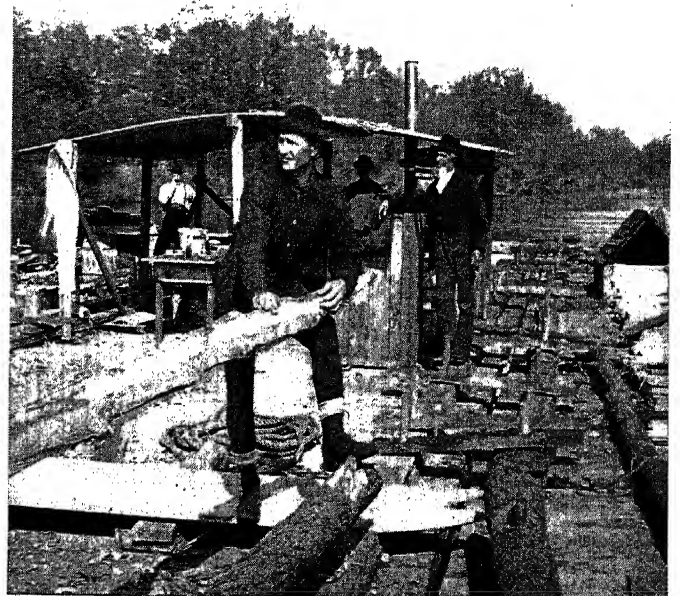
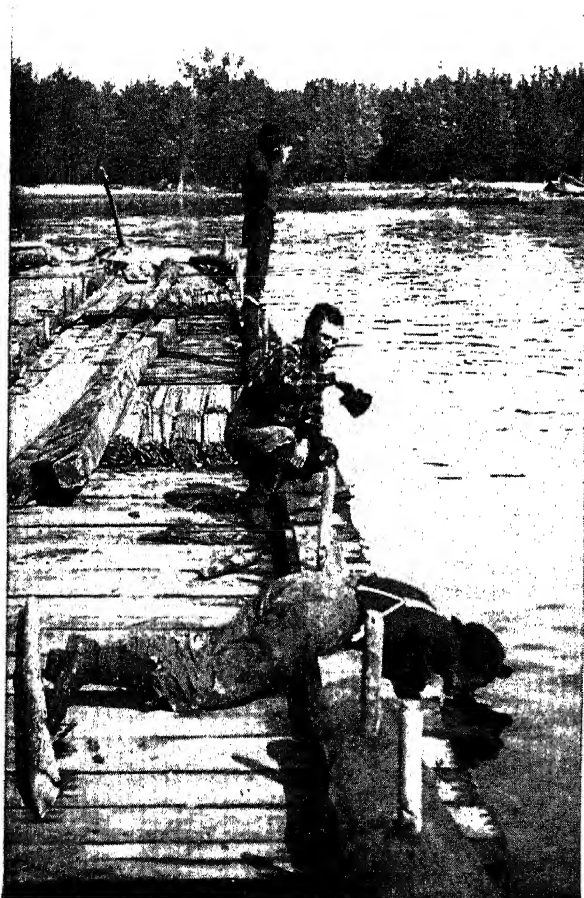
Guiding the raft by long poles, helmsmen at either end work fast and furiously as the raft passes through the rapids at the Kilbourn, Wisconsin, Dam.



With handspikes crew lifts raft
off sand bar.



(Above) Rope is thrown ashore to anchor
raft to a tree. (Lower left) Crew drinks
from current and (below) enjoys a period
of calm on downstream course. Crews
slept under shingle wigwams, seen at
right, below.



CHAPTER SIX. THE RAILROAD AND THE PEOPLE










From "Harper's Weekly," September 19, 1857


To the traveling public the pioneer conductor was often regarded as gruff, rude and insistent upon strict obedience to picayune rules. To the harassed conductor the traveling public seemed often bumptious, contrary, ever alert to blame its discomforts upon him personally, and prone to sleep past its station. (Below) An example of the mildly puzzling type of rebus which conductors, particularly those on local lines, printed at their own expense and distributed as hat checks, to entertain passengers.

Burlington & Southwestern R. R.

No lay over checks
given on local tick-
ets.

Put this  Your  &  P

and not  B  From  If U wish to ride  your

and not B  UP.

Good for this trip
and train, only.

J. A. Jamieson, Conductor.



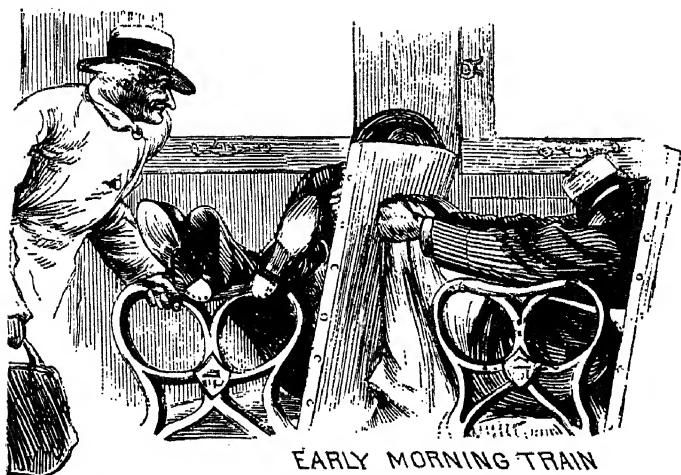
From "Hill's Manual of Social and Business Forms," by T. E. Hill, Chicago, 1883



GOING THROUGH A
TRAIN WHILE IN
MOTION.

Etiquette hints for travelers in the 1880's: "A lady and gentleman should avoid evidences of undue familiarity in the presence of strangers. Couples who may evince a silly affection by over-fondling of each other in public (*see illustration*) make themselves appear extremely ridiculous to all who may see them. . . . If a gentleman is an authorized escort he should purchase the needed confections or literature on the train. He should be fruitful in the introduction of topics that will enliven, amuse and instruct the lady, if she is inclined to be reticent. . . . Ladies and gentlemen who are strangers, being thrown into the com-

pany of each other for a long journey, need not necessarily refuse to speak to each other. While the lady should be guarded, acquaintance may be made with certain reserve."



EARLY MORNING TRAIN
PASSENGER - "I WOULD LIKE TO HAVE THIS SEAT,
UNLESS YOU HAVE A TICKET FOR YOUR FEET"



"THIS IS MY SEAT, MADAM. MY
PAPER IS IN IT" LADY "THIS IS THE
ACCOMMODATION TRAIN YOU ACCOMMO-
DATE ME & SOMEONE WILL YOU?"

From "Harper's Weekly," September 20, 1873



"Ten Minutes for Refreshments" was the title given this cartoon-advertisement in the early 1880's, and the theme was half-scandal, half-comedy in the mind of the traveling public, especially those who saw the quick-lunch stampede demonstrated on Western roads by passengers whose journey was too long for them to carry home-packed meals in valises or shoe boxes.

From the Bella C. Landauer Collection, New York Historical Society

When the Burlington established two dining cars on its Chicago to Omaha run in 1872, prices were high. They fell during the great panic of 1873 and remained low for several years, but by 1881 were soaring again—seventy-five cents for a meal such as is described on the menu at the right. The price permitted the passenger to order as many of the items as desired on each of the twelve courses. Tipping was frowned upon as “European flunkeyism,” degrading to independent American labor. Between meals passengers could sustain themselves with fruit and with sandwiches purchased from “train-butchers,” usually aggressive boys who wore uniforms on through trains, more informal wear on locals.

—♦ MENU ♦—

Saddle Rock Oysters on Shell.

Green Turtle.	Brunoise.	Chicken Gumbo.	Crab Bisque.
Boiled Lake Trout, a la creme.	Baked Blue Fish, Madeira Sauce.		
Broiled Spanish Mackerel, Saratoga Potatoes.		Brook Trout, Breaded a la Anglaise.	
Leg of Mutton, Caper Sauce.	Buffalo Tongue, Piquant Sauce.		Turkey, Oyster Sauce.
Chicken, Celery Sauce.			
Loin of Beef. Saddle of Southdown Mutton. Stuffed Loin of Veal.			
Spring Lamb, Mint Sauce.		Turkey, Cranberry Sauce. Ham, Champagne Sauce.	
Spring Chicken, Giblet Sauce.		Rib ends of Beef.	
Beef Tongue.	Pheasant Larded aux Truffes.	Lobster Salad.	
Mayonnaise of Chicken.	Spiced Oysters.	Pate de Foie Gras.	
Fillet de Boeuf Pique, aux Champignons. Lamb Curry with Rice.			
Sweetbreads Larded, aux Petits Pois.		Fresh Mushrooms, Stuffed.	
Filets of Chicken, aux Truffes.		Timbal of Macaroni.	
Apple Charlotte, a la Parisienne.			
Mutton Kidneys, Grille, Madeira Sauce.			
Punch a la Romain.			
Saddle of Venison, with Jelly.		Young Prairie Chicken.	
Canvas-back Duck.	Loin of Antelope,	Vin d' Oporto.	English Snipe.
Broiled Woodcock on Toast.		Quail, Stuffed and Larded.	
Broiled Teal Duck, with Olives.			
Boiled Potatoes.	Mashed Potatoes.	Baked Sweet Potatoes.	
Stewed Tomatoes.	Fried Egg Plant.	Lima Beans.	
Green Corn.	Cauliflower.	Green Peas.	
Turnips.	Squash.	Asparagus.	
English Plum Pudding, Brandy Sauce.		Lemon Meringue Pie.	
C. B. & Q. Pudding, Hard Sauce.		Latour Blanche Jelly.	
Apple Pie.	Cranberry Pie.	Omelet Soufflee.	Italian Cream.
Fruit Cake.	Macaroons.	French Kisses.	Fruit Jelly.
Vanilla and Strawberry Ice Cream.		Neapolitan Cream.	
Figs.	Apples.	Oranges.	Nuts. Raisins. Grapes. Bananas. Pears.
Tea.		Coffee.	

BREAKFAST AND SUPPER TO ORDER.

ALL MEALS 75 CENTS.

NOTE—Choice Wines, Liquors and Cigars imported direct by the Burlington Company always on hand in the Dining Cars.



THE "SANDWICH" BOY



GERMAN PASSENGER LUNCHING

**THIS IS THE ONLY ROUTE RUNNING
PULLMAN DINING CARS
EAST FROM OMAHA.**

You Will Find Tickets

VIA

C., B. & Q. R. R.

"Burlington Route"

TO

CHICAGO,

Niagara Falls,

Buffalo,

Pittsburgh,

Cleveland,

PHILADELPHIA,

Baltimore,

WASHINGTON,

And All Points

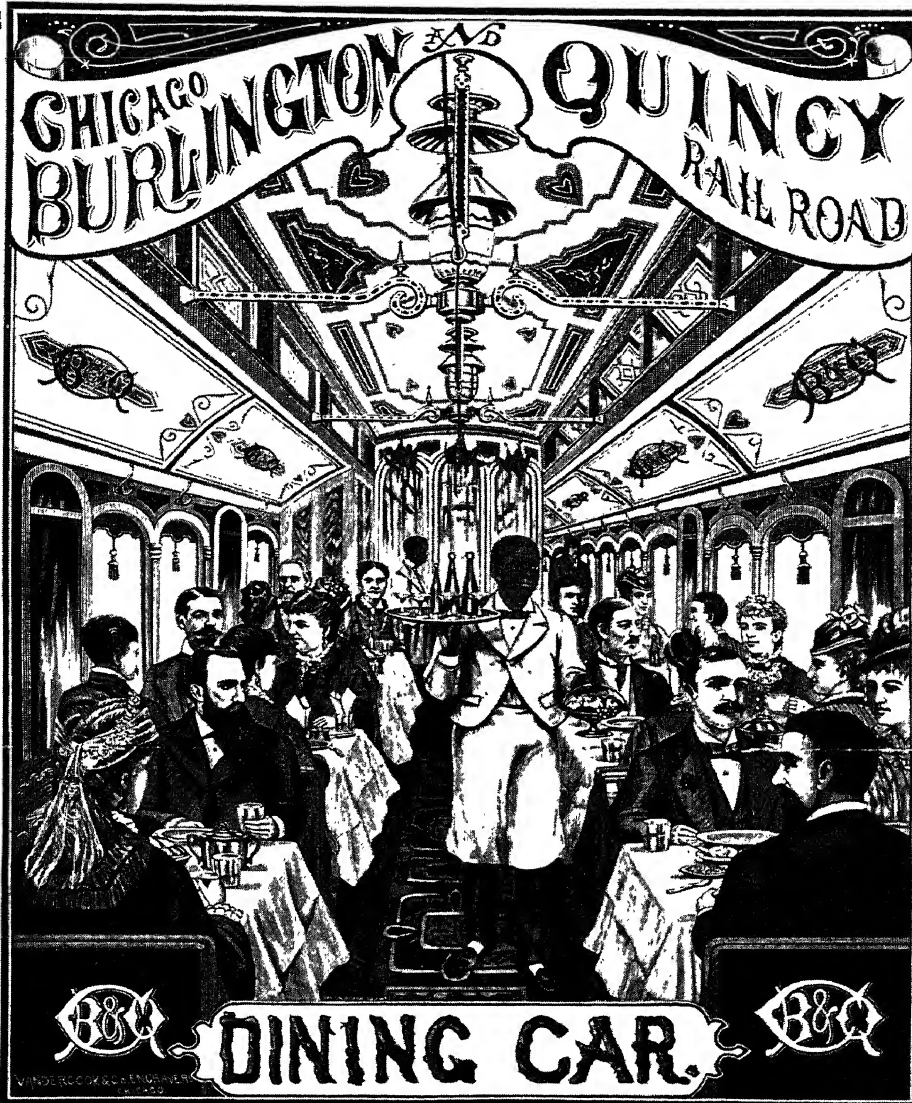
EAST.

See Your Tickets Road

Chicago, Burlington & Quincy R. R.

FOR SALE AT ALL

Offices in the West



You Will Find Tickets

VIA

C., B. & Q. R. R.

"Burlington Route"

TO

NEW YORK,

BOSTON,

Albany,

Springfield,

Toronto,

MONTREAL,

Portland,

CINCINNATI,

And All Points

EAST.

You Make Connection in

CHICAGO

WITH

Seaside Palace Sleeping Car Lines

TO THE EAST.

**THIS IS THE ONLY ROUTE RUNNING
PULLMAN SIXTEEN-WHEEL DRAWING ROOM SLEEPING CARS
IN AMERICA.**

E. P. RIPLEY,

Gen'l Eastern Agent, New York and Boston.

D. W. HITCHCOCK,

Gen'l Western Pass. Agent, Chicago, Ills.

Through the 1870's the Burlington was suggesting in its advertisements that Westerners were now enjoying the same culture as Easterners, the same fashionable attire, good manners — and elegance in transportation. Sixteen-wheel Pullmans were replaced, beginning in 1876, by twelve-wheelers.



From "The American Railway," New York, 1889



MORNING TOILET

From "Frank Leslie's Illustrated Newspaper," July 4, 1885

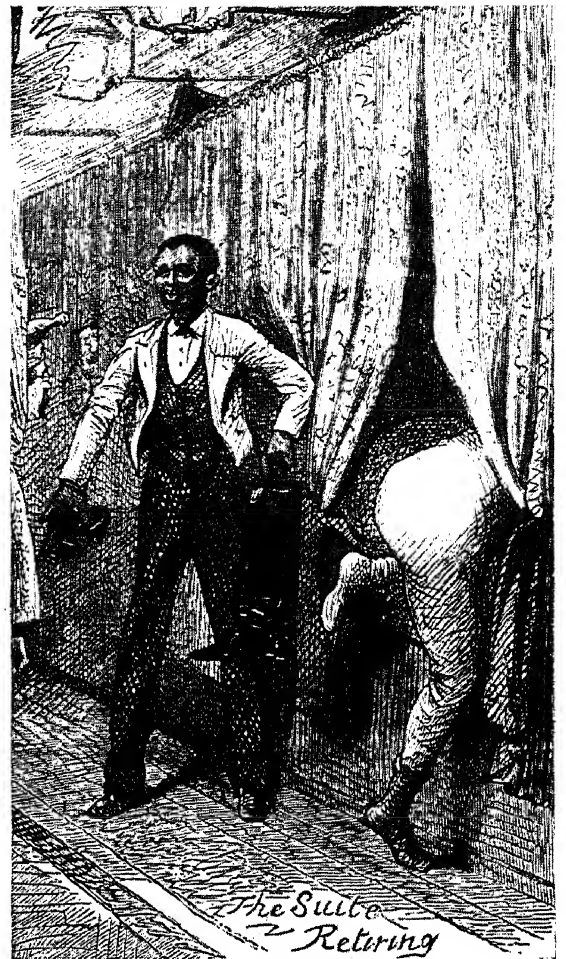
Sketches of a typical flagman at a crossing, and of passengers on non-Pullman cars, as drawn in the 1880's.



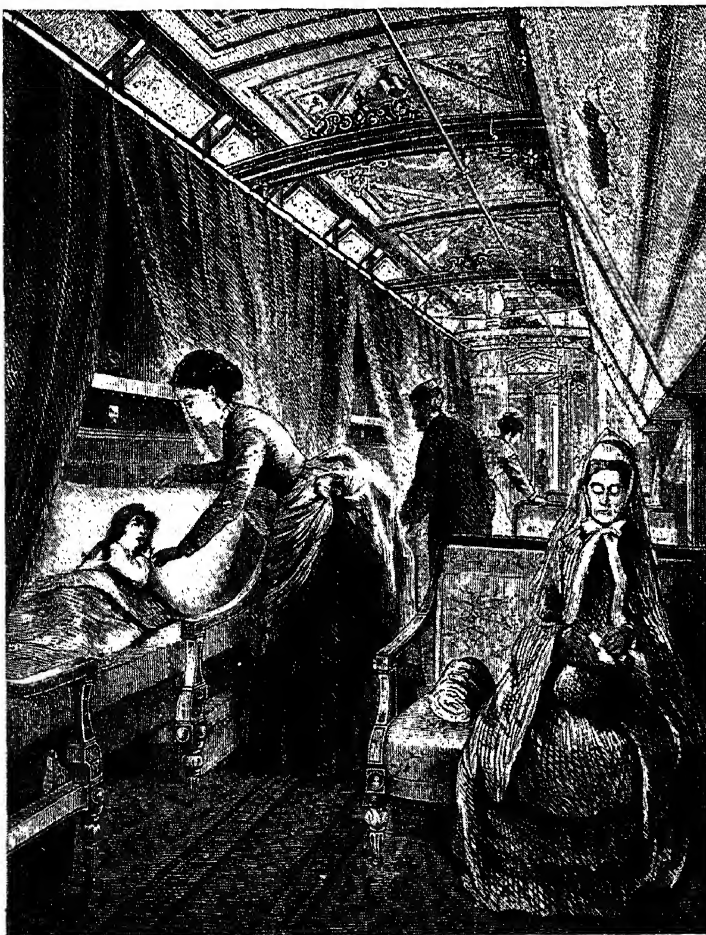
2 O'CLOCK IN THE MORNING

From "Frank Leslie's Illustrated Newspaper," July 4, 1885

The scene at the right, while made in Canada during a tour by the Governor General, was described by the sketch artist as common to all roads "wherever Pullman cars can be found, namely, a gentleman going to bed in one of those luxurious conveyances." The drawing below celebrates the comforts of Western travel via Pullman in 1872, with children being put to bed early. The elderly woman is obviously undergoing the pangs of prudery which beset puritanic females upon the approach of their first night on the sleeping cars — the ordeal of disrobing in the confines of the berth, with the awful public out there in the aisle, just beyond the fragile curtain.

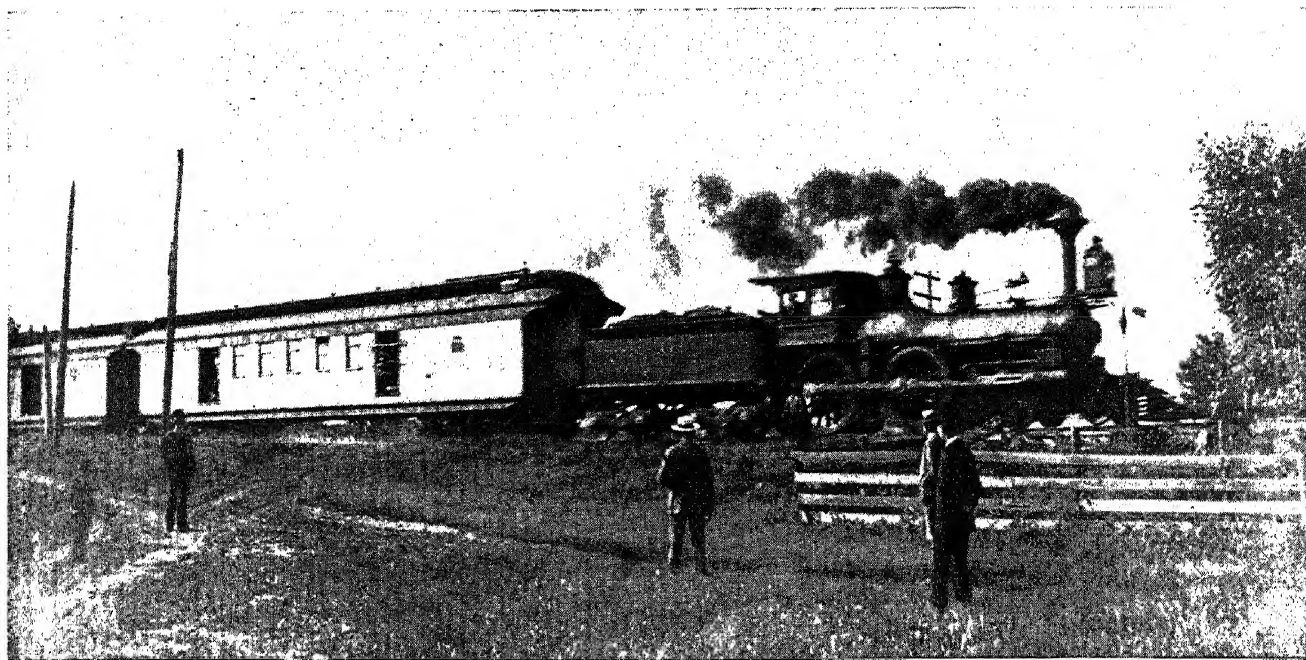


From the "Graphic," London, January 4, 1879

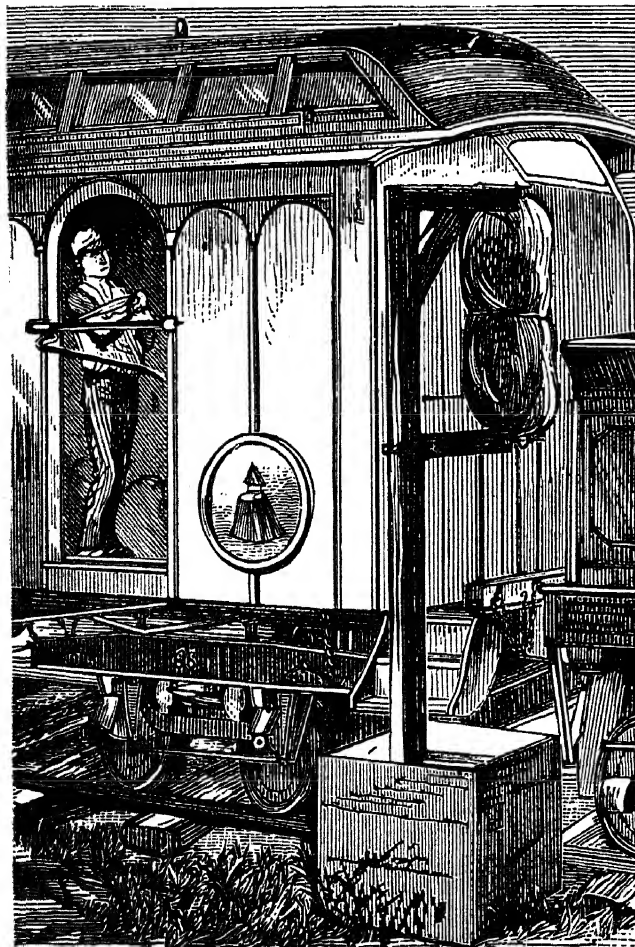


From "Harper's New Monthly Magazine," May 1872

In 1858 railroad executives in Chicago became excited about bettering accommodations for overnight passengers. Long lines would soon stretch west of the Mississippi. A new concept of travel was dawning. Within a few years the road which could supply the most comfort to travelers on a two-day, three-day, four-day trip would secure the Western passenger business. The Burlington converted two passenger coaches into sleeping cars. George M. Pullman remodeled three for the Chicago and Alton Railroad. The five were unsuccessful. When Pullman in 1865 had established, through patent, upper and lower berths as the world ever since has known them, the Burlington, abandoning its own efforts, as did other roads, accepted his innovation and contracted for his cars. It had four in service in 1865.



The famous white “fast mail” trains from Chicago to Omaha — a service starting March 10, 1884 — were built in the company’s shops at Aurora. (*Below*) Catching mail at way stations.



From “Harper’s Weekly,” October 9, 1875



From “Harper’s Weekly,” October 9, 1875



From "Harper's Weekly," September 4, 1875

A transcontinental reporter in 1875 described the scene above, as picturing a familiar sight on the prairies: "The station is too poor to put up a post at the roadside to hold the bag for the passing train to seize, and the postmaster's pretty daughter must serve instead."

Since the "fast mail" trains of the Burlington and other roads came to the West during the political struggle between the railroads and the Grangers, the latter denounced the move as a sinister plot to deliver quickly Eastern newspapers which supported the railroads, and thus to weaken country newspapers which championed the reformers.

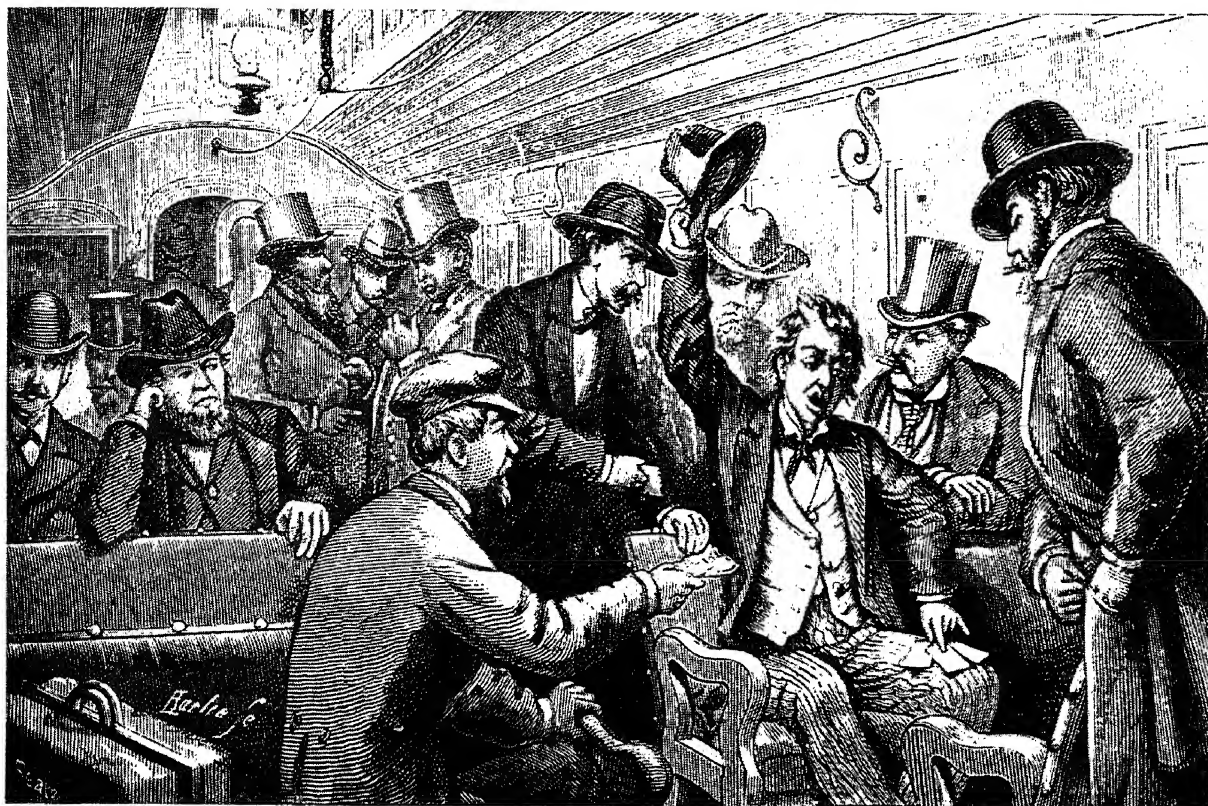


From "Mississippi Outlaws and the Detectives," by Allan Pinkerton, New York, 1879

Robberies of express cars (*above*) enlivened the West in the 1870's. Crowds (*below*) rush on April 3, 1882, to the house at St. Joseph, Missouri, where Jesse James has just been assassinated. Sympathy for "James Boys" was strongest in antirailroad, antimonopoly rural areas. The outlaw brothers never held up a Burlington train because, it was said, "the road had given Jesse's mother a pass." More likely the pass, if issued, was in the name of his stepfather, Reuben Samuels, who was a physician of Clay County, Missouri.



From "Frank Leslie's Illustrated Newspaper," April 15, 1882



From "Criminal Reminiscences," by Allan Pinkerton, Chicago, 1878

To curb train robbers and express thieves, the Burlington and other large railroads employed the detective Allan Pinkerton, who, in the soft hat, beard, shaved upper lip, leans forward (*above*) with his hand to his head, observing the three-card monte operations of the most celebrated of railroad pests, Canada Bill. The criminal, who was a magnificent actor as well as manipulator of cards, waves his hat, shouts and directs attention to cards on his knee while passengers, some of them his "cappers" and others unsuspecting and well-heeled merchants, press forward to bet him that they can "pick up the queen." Canada Bill, who posed as a garrulous "Hoosier Granger," worked trains so successfully that the Western lines forbade card gambling altogether, whereupon he publicly offered one road \$10,000 per annum for the right to "throw three-card monte," pledging his word that he "would confine his professional attentions exclusively to Chicago commercial travelers and Methodist preachers."

Pinkerton also prosecuted professional tramps who became a menace to lonely farm communities along the railroads. (*Following page*) It was the fashion to blame hobos not only for petty thefts but for the kidnaping of children and the rape of farm wives. Too little attempt was made by constables and police to differentiate between professional tramps and penniless migratory workers who, in times of bitter unemployment, stole rides while hunting work. Fights between tramps and freight crews were common on roads whose policy was to expel free riders, but according to Josiah Flynt, the literary hobo, the Burlington was so lenient in the Middle West that it was called the "bums' line."



From "The American Railway," New York, 1889



From "Harper's Weekly," December 15, 1883



From "Harper's Weekly," December 15, 1883

Flynt stated, however, that the Burlington's freight-car crews in Nebraska were as tough as those of other Western lines, forcing the hobos off the tops or out of the interiors of boxcars (*preceding page*). In such situations the "bums" tried secreting themselves either beneath the cars on the trucks or on the truss rods which ran from end to end, or between the cars on the "bumpers." The first was more secure from detection but far more dangerous and uncomfortable. Flynt, after considerable national experience as a tramp, concluded that the average hobo in the West was rougher than his Eastern counterpart, wilder, more reckless, kinder-hearted — "he always has his razor with him and will 'cut' whenever there is provocation. Tramping was less profitable in the West where," said Flynt, "there are fewer cities; even the towns are too far apart and, taking the country as a whole, the inhabitants are by no means so generous."



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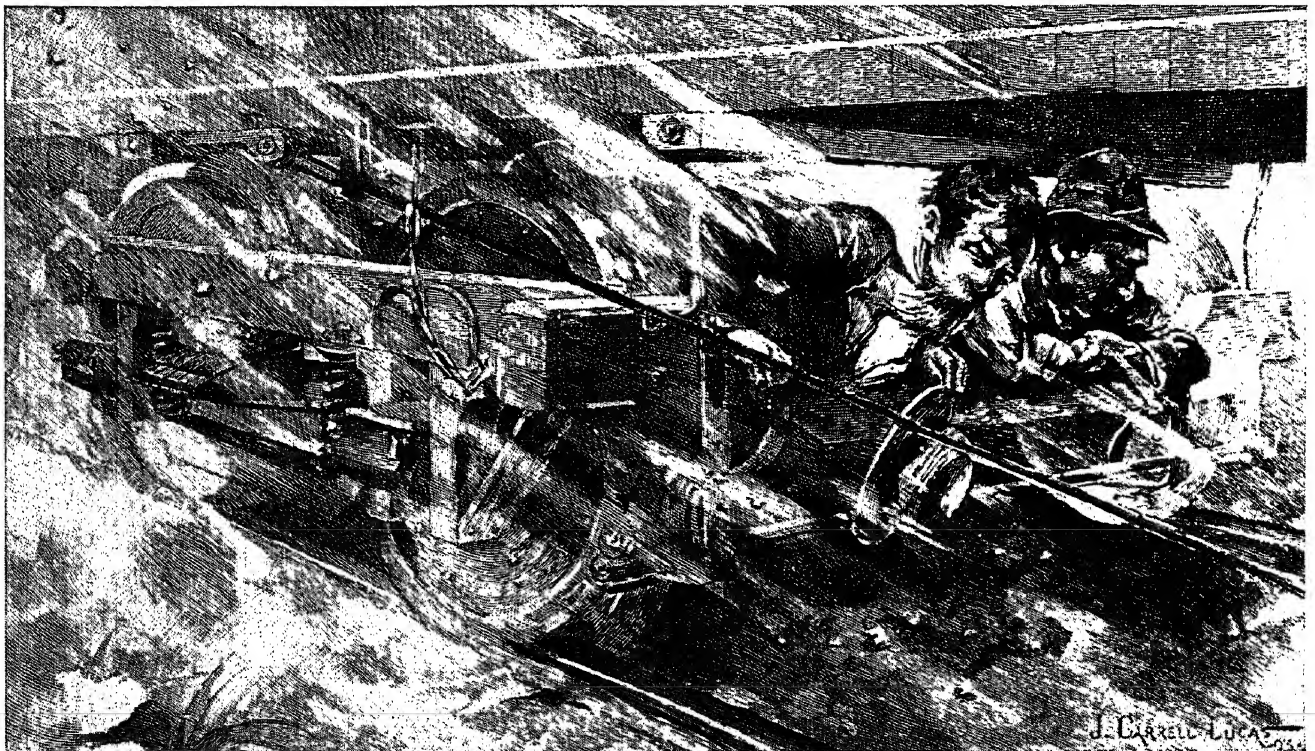
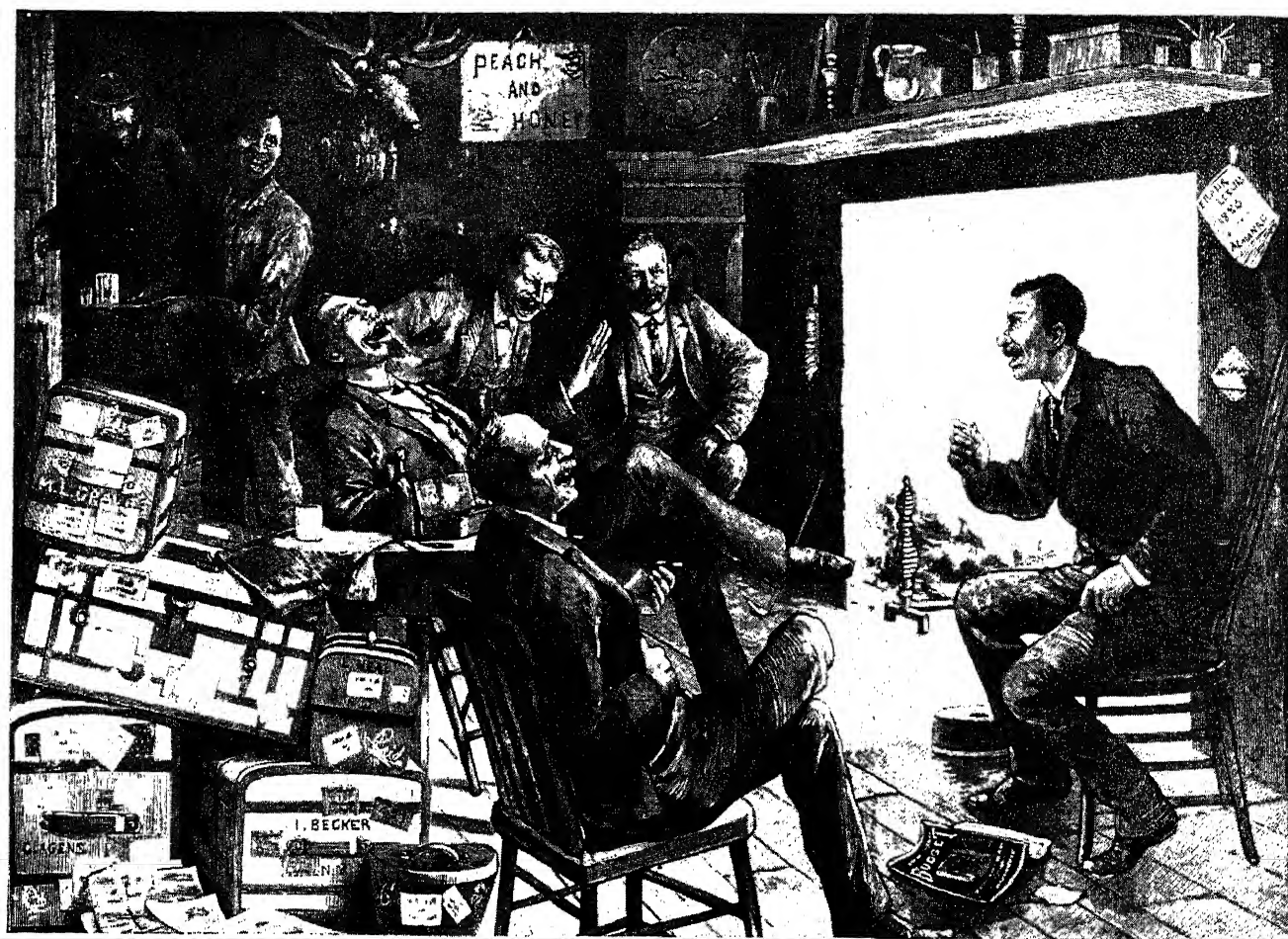


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From "Frank Leslie's Illustrated Newspaper," November 28, 1885



From "Frank Leslie's Illustrated Newspaper," July 4, 1885

Fanning out from Chicago in the early 1870's came the drummers, traveling salesmen for drygoods jobbers who expanded quickly to other merchandise as the railroads opened up the nation's interior. Their talent for funny stories, for smooth salesmanship in the "sample rooms" of hotels, and for general sociability made them an American institution. By the turn of the century their system evolved the trade convention (bottom, opposite page), by which local merchants were taken at excursion rates to the metropolitan jobbing market.



From "Harper's Weekly," April 28, 1883

The drummers' room in a Western hotel.



Courtesy Nebraska State Historical Society

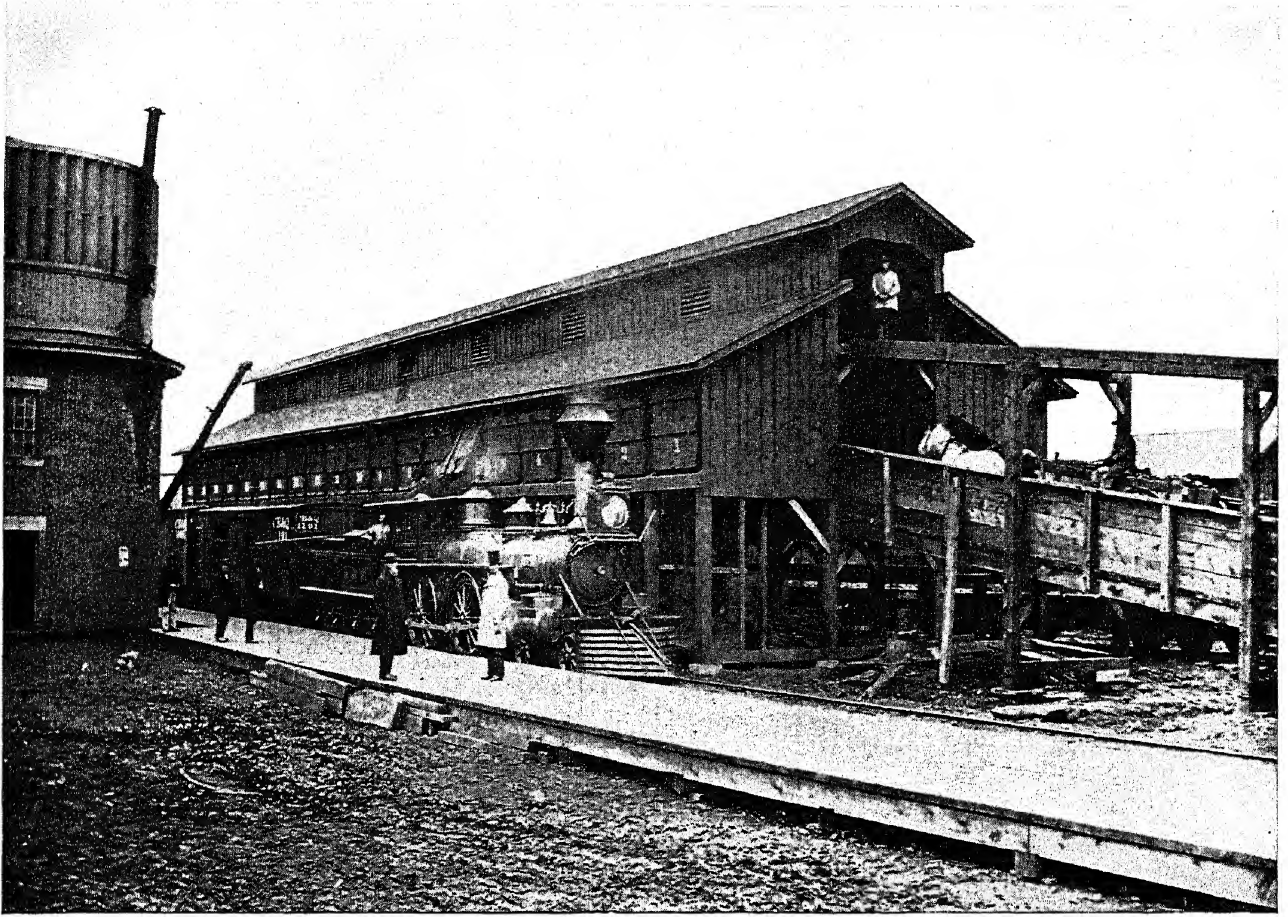
Trade excursion of Nebraska merchants, 1905.



From "Harper's Weekly," April 25, 1874



Courtesy Val Kuska, Omaha, Nebraska



Courtesy Aurora Historical Society

(Above) Although the Burlington began in 1856 converting from wood to coal for locomotive fuel, enough of its engines were still using wood in 1866 to keep farmers of the region bringing in wagonloads of it to the Aurora Wood Chutes.

(Opposite page) Two views of railroad workers and their families in the West. The photograph is of Kilpatrick's grading outfit on the Burlington and Missouri grade through Custer County, Nebraska, in the late 1880's and illustrates the road's policy of patronizing local settlers for labor and supplies, a policy profitable to the settlers in times of crop failure or national depressions. The drawing is of a typical railroad workers' camp in the early 1870's, with the males in the morning departing for action, and their females launching domestic action of their own.



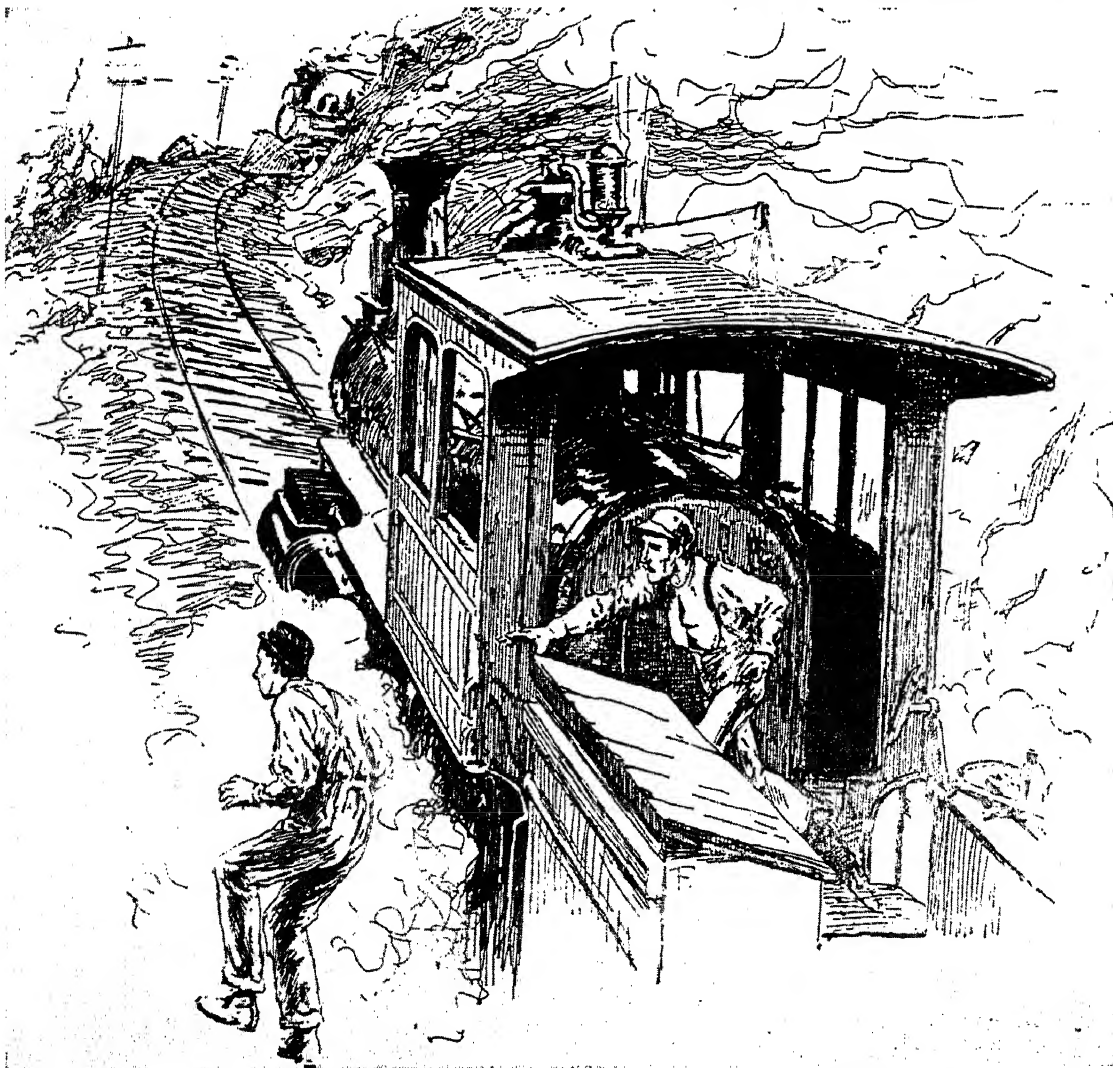
From "Harper's Weekly," March 21, 1874

Water for locomotives on the Great Plains was often collected in reservoirs during the rainy season, and then pumped, as needed, into tanks by the leisurely method pictured above.

(Right) If the cowboy has been the chief hero of American folk song, the railroad engineer has been his closest rival. Long before the epic death of Casey Jones, endless ballads had been sung about brave engineer men who clung to their cabs in the face of collisions, died trying to save the passengers, and who, as a reward, were transported spiritually to "God's Great Roundhouse." The song pattern closely followed John Hay's poem glorifying Jim Bludso, the Mississippi River steamboat pilot who died in flames shouting, "I'll hold her nozzle agin the bank till the last galoot's ashore." (Below) As a matter of fact, engineers, as a class, were too intelligent not to jump when powerless to prevent a wreck.



From "Harper's Weekly," May 10, 1873

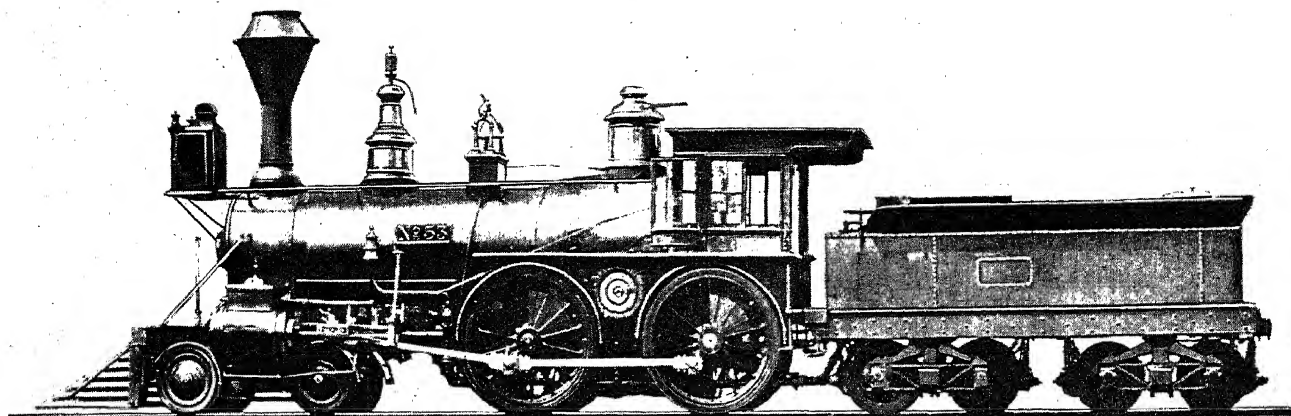


From "The American Railway," New York, 1889



(Above) Volunteer fire department at Holdrege, Nebraska, 1888. (Below) A Burlington section gang in the 1870's.

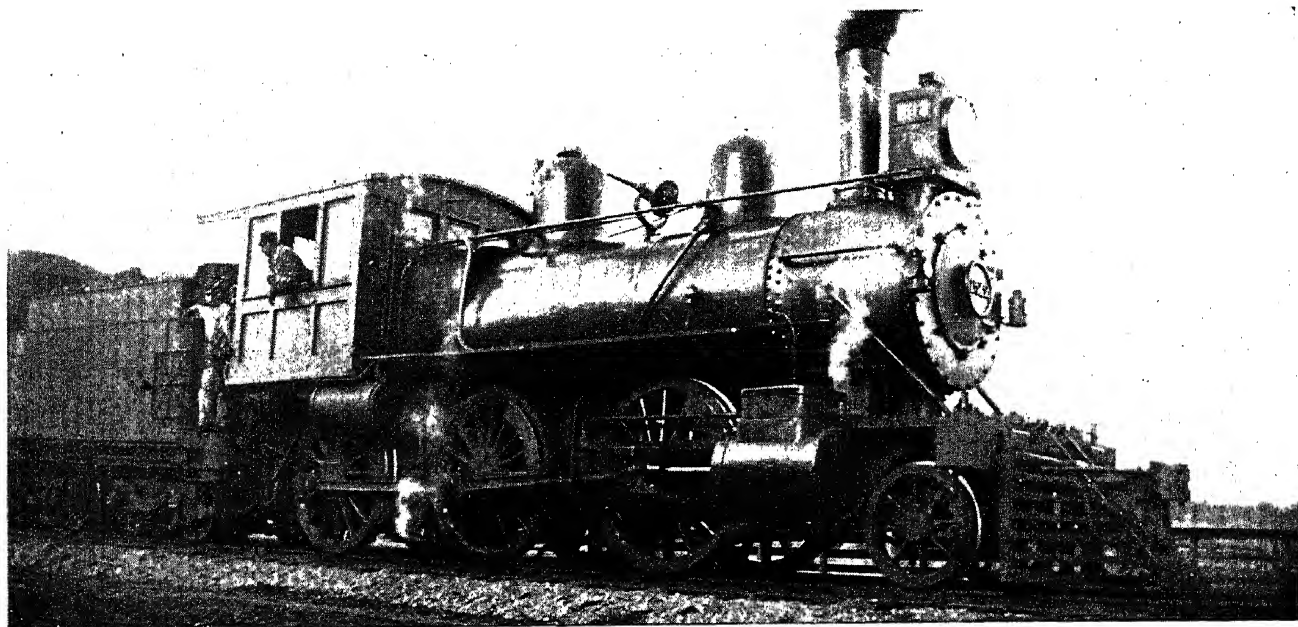




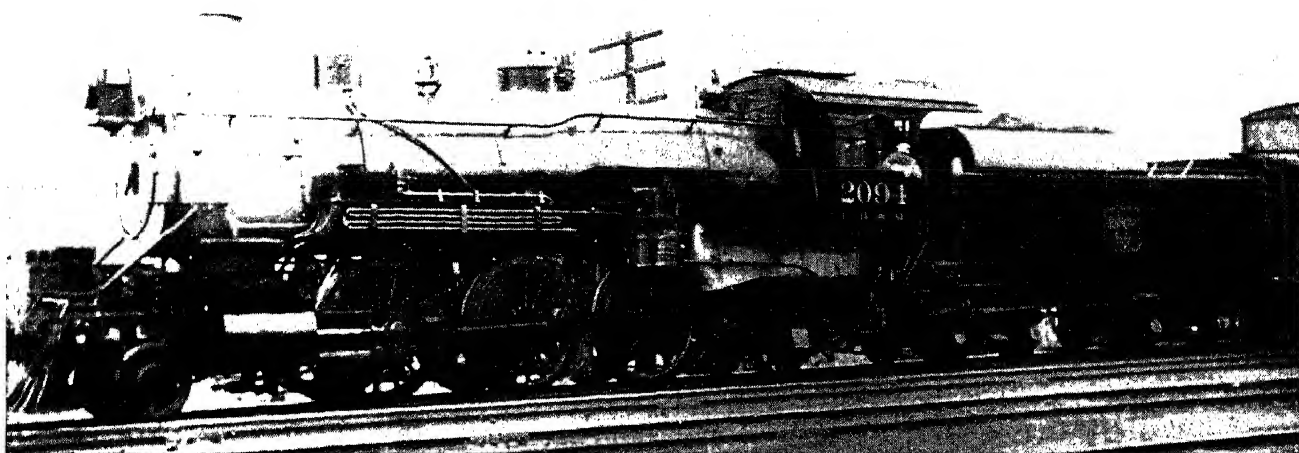
American-type locomotive, built in 1870.

For nearly forty years the prevailing type of steam locomotive, known as the American (*above*), had a two-axle pilot truck (four wheels) and two pairs of driving wheels (four wheels), and was described therefore as a 4-4-0. As cars became heavier, more powerful locomotives had to be designed with larger boilers, greater steam capacity and a greater number of driving wheels. Freight and passenger engines were differentiated, freight engines having a single-axle pilot truck, driving wheels of relatively small diameter, and in time trailer trucks to support the firebox, made necessary by the larger boilers. Passenger locomotives needed for speed two-axle pilot trucks, larger diametered drivers, and also trailer trucks.

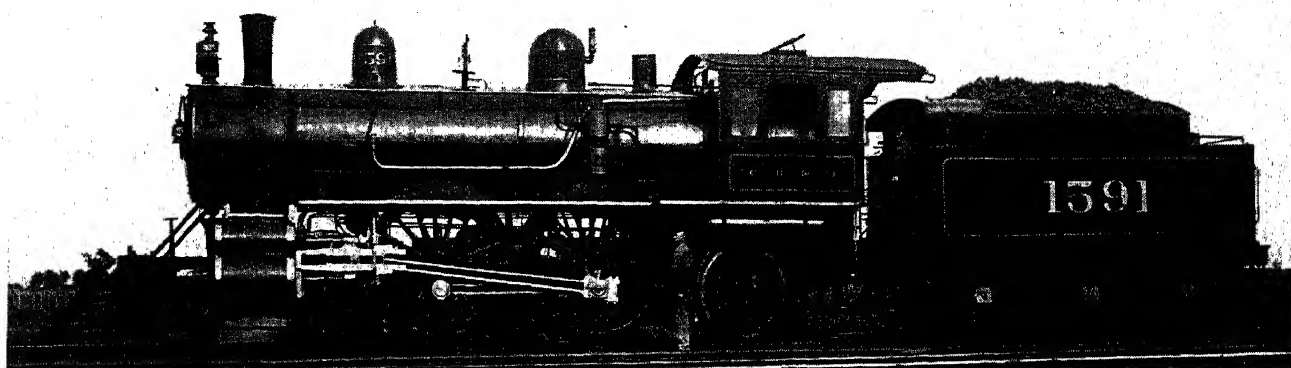
Thus the evolution proceeded through the Mogul (2-6-0), the famous Prairie (2-6-2) and the Mikado (2-8-2) for freight purposes; and the Atlantic (4-4-2), the Pacific (4-6-2) and the Hudson (4-6-4) for passenger traffic. Finally, as the demand for faster freights increased, another general utility, all-around locomotive, as the old 4-4-0 had been, was found in the huge Mountain type, a 4-8-2.



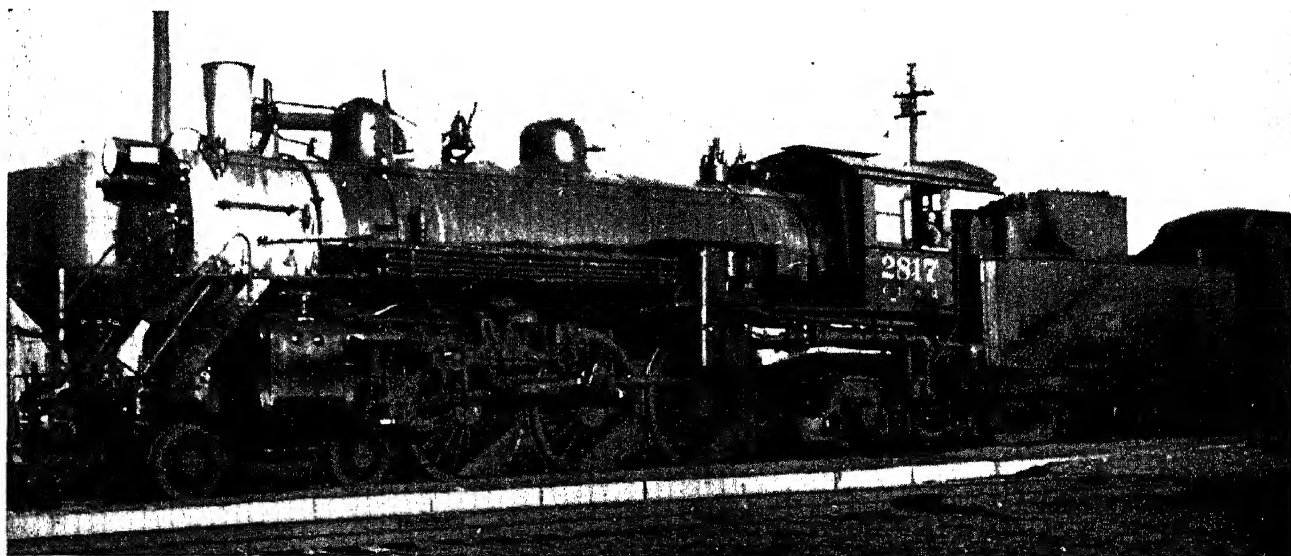
A Mogul-type locomotive, built in 1899.



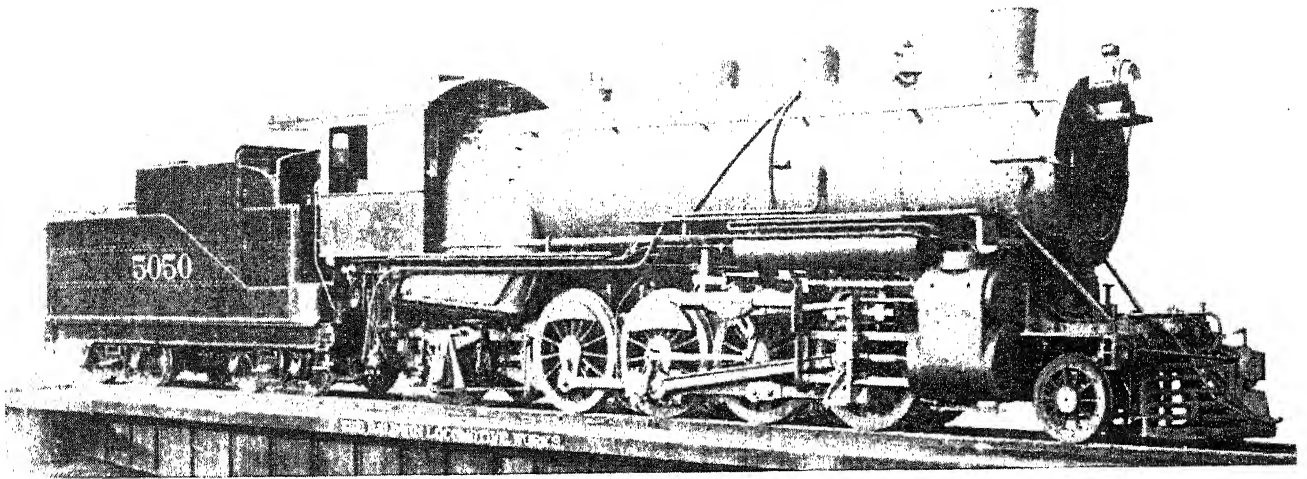
The Prairie type (2-6-2), first built by the Burlington in 1900 to handle fast freight in fairly level country, became the most widely used type of locomotive. No. 2094 (*above*) was built in 1906.



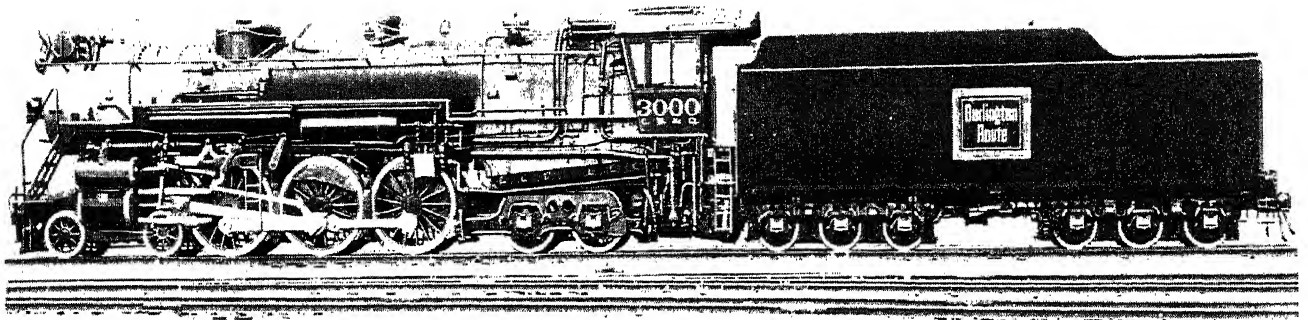
No. 1591 (*above*) was the first engine of the fast Atlantic type (4-4-2), built in 1899, with a large boiler, great steaming capacity, and capable of running at a sustained high speed with a heavy passenger train. Note the size of the driving wheels and the 4-wheel pilot trucks. This engine ran over 160,000 miles in the first year of service and, on occasion, averaged 64.6 miles per hour from Galesburg to Chicago.



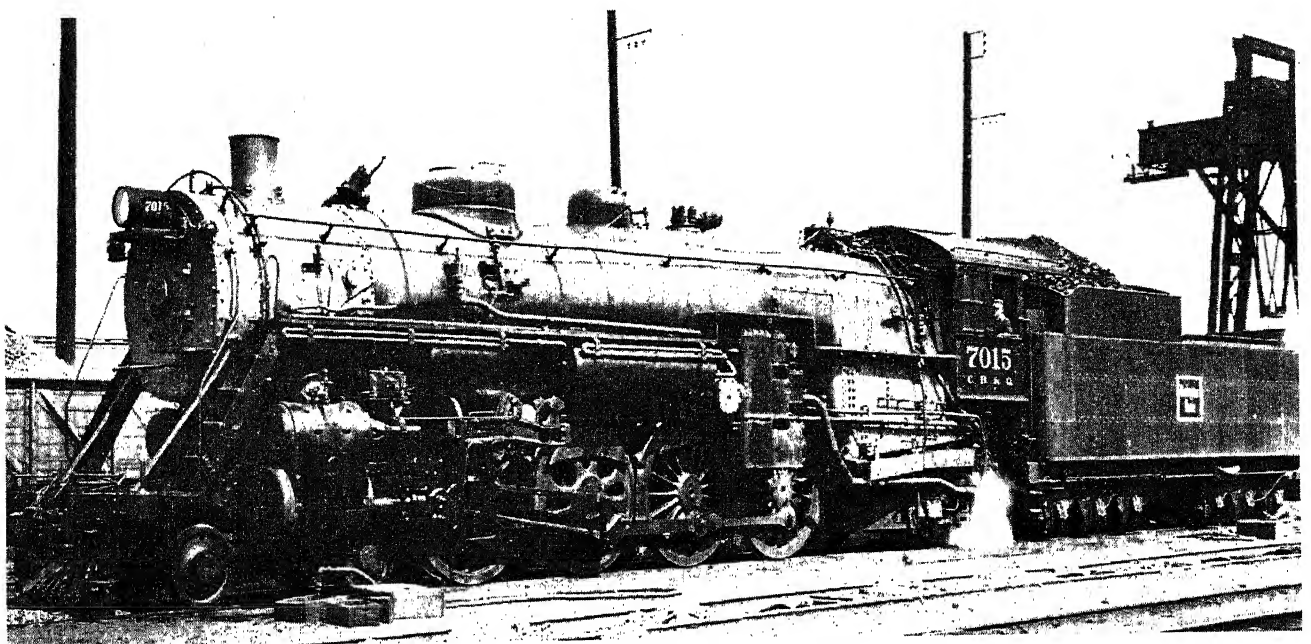
The Pacific type (4-6-2), built in 1906.



The Mikado type (2-8-2) for heavy freight service, either fast freight or drag, was adopted by the Burlington in 1910.



The Hudson type (4-6-4), a development of the Pacific for fast passenger service.



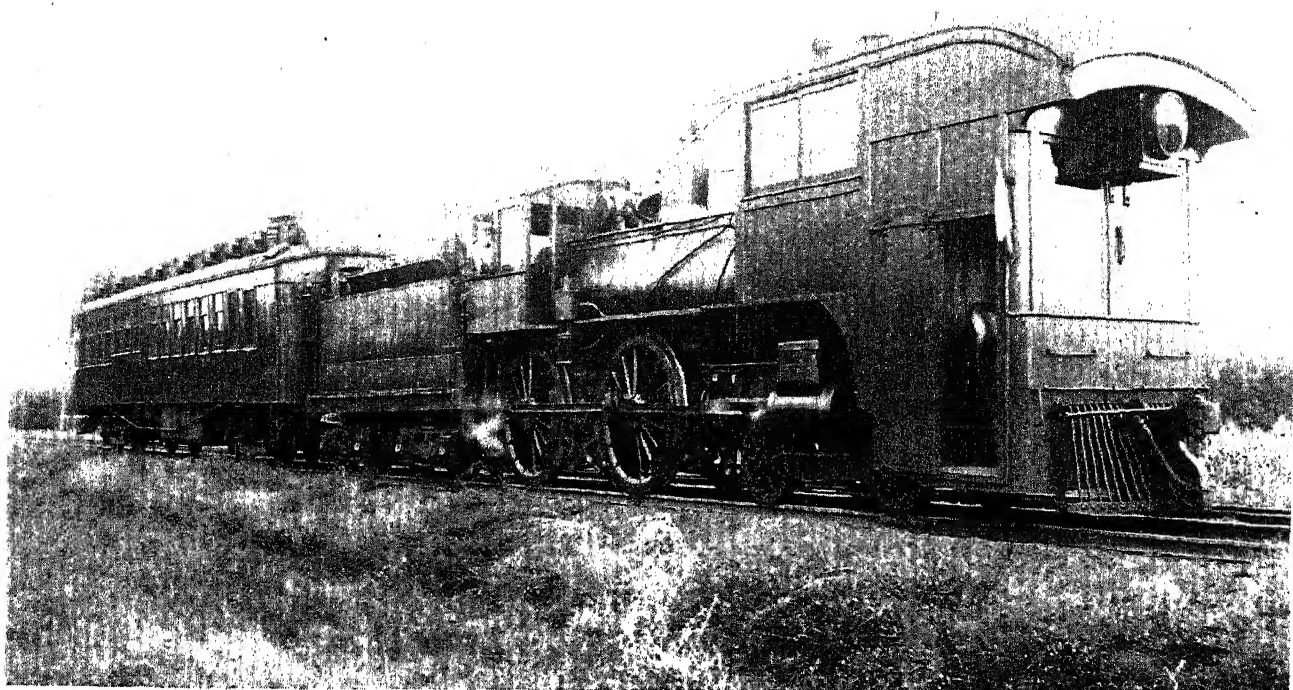
The Mountain type (4-8-2), the general utility locomotive of the 1920's and 1930's.

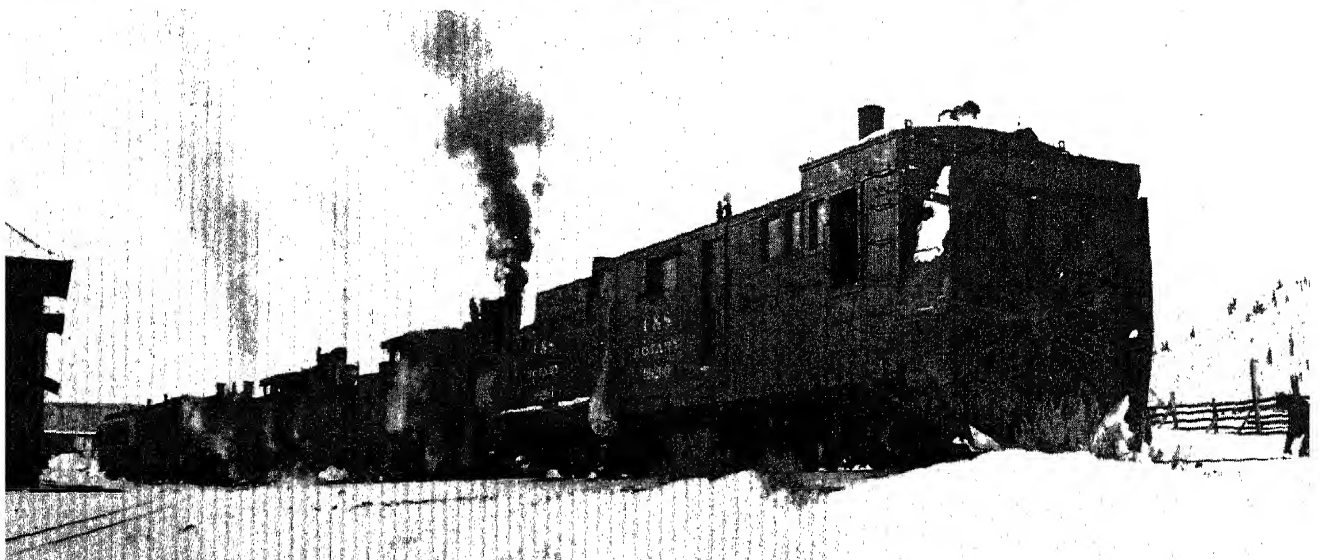
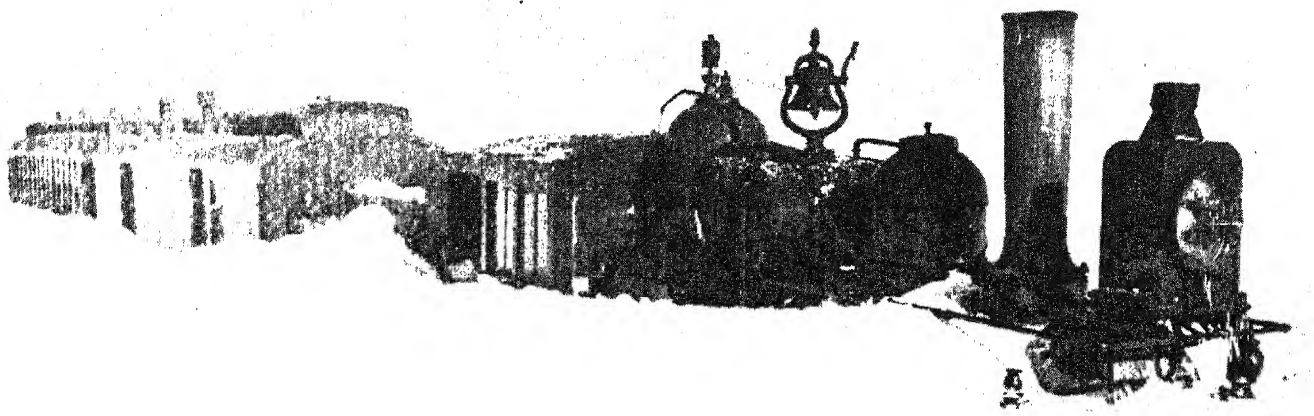


When the Burlington built through Box Butte County, Nebraska, in the late 1880's, it missed the budding town of Nonpareil by a scant five miles, and thereby started a bitter intracounty quarrel. Nonpareil was the county seat and had expected a great future, but soon sentiment rose for the location of the governmental center on "a railroad town," such as Alliance or Hemingford, each of which advanced its claim. The question came to a vote — to several elections in fact, since a three-fifth majority was a legal requirement. Finally Hemingford won by sixteen votes, built a courthouse and was happy for nine long years. Then a new election awarded the honor to Alliance and the county seat found a third home. Contractors airily promised to move the courthouse within thirty days, but at the end of ten days had taken it only twenty feet of its nineteen-mile journey. So the ever-energetic and resourceful Burlington executive, George W. Holdrege, went into action, loaded the building (*above*) on specially strengthened cars, and had it hauled and delivered in six short hours, amid cheers from Alliance, tears from Hemingford and everlasting sighs from Nonpareil.



The Burlington's first inspection engine, made around 1899 in the Aurora shops by adding a superstructure of wood to the whole length of a regular locomotive. This type of car, from which officials inspected track, roadbed, bridges, and so on, had been replaced by 1905 with the observation cab (*below*), which was attached to the front of the locomotive, giving inspectors a more convenient view ahead.

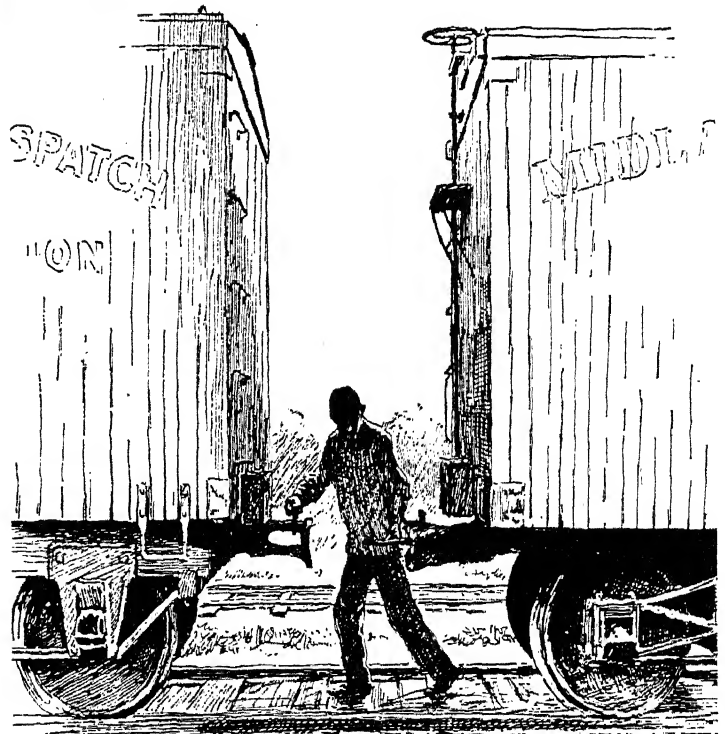




(*Opposite page*) By 1908 when the Burlington bought the Colorado and Southern, trains which stalled in Rocky Mountain snows were being rescued not by the pusher plow, on the front of the lead engine, but by its successor, the rotary plow, which with four engines behind it bucked the biggest of drifts.

So long as the hand brake (*top, right*) was the only means of slowing down freight trains, casualties were appallingly high among brakemen, especially in winter. To run from one car to another across slippery roofs was one of the most hazardous of American occupations and in 1886 and '87 the Master Car Builders' Association held field tests on Burlington Hill, just west of Burlington, Iowa, for inventors who were proposing substitutes for the hand brake. The air brake submitted by George Westinghouse proved the best but was, in fact, too good, since it stopped the test train so quickly that it threw the judges the length of the car and one of them broke a leg. The bruised committee reported adversely and that night in a Burlington office car it was suggested to Westinghouse that he experiment with electric brakes. While Westinghouse was objecting on the ground that electricity was too uncertain, a Burlington official pushed an electric button to summon a porter. The bell did not ring. Westinghouse quipped the 1887 equivalent of "See what I mean?" and sticking to air had perfected, in his mind, plans for the "automatic valve" before he left Burlington. It was accepted in June 1888 — one of the classic inventions of railroad history.

The invention in 1890 of the automatic coupler for freight cars removed another of the chief hazards to life — and fingers — of brakemen, who, under the old method (*bottom right*), dropped pins by hand to link the drawbars of the two cars.



Both pictures from "American Railway," New York, 1889

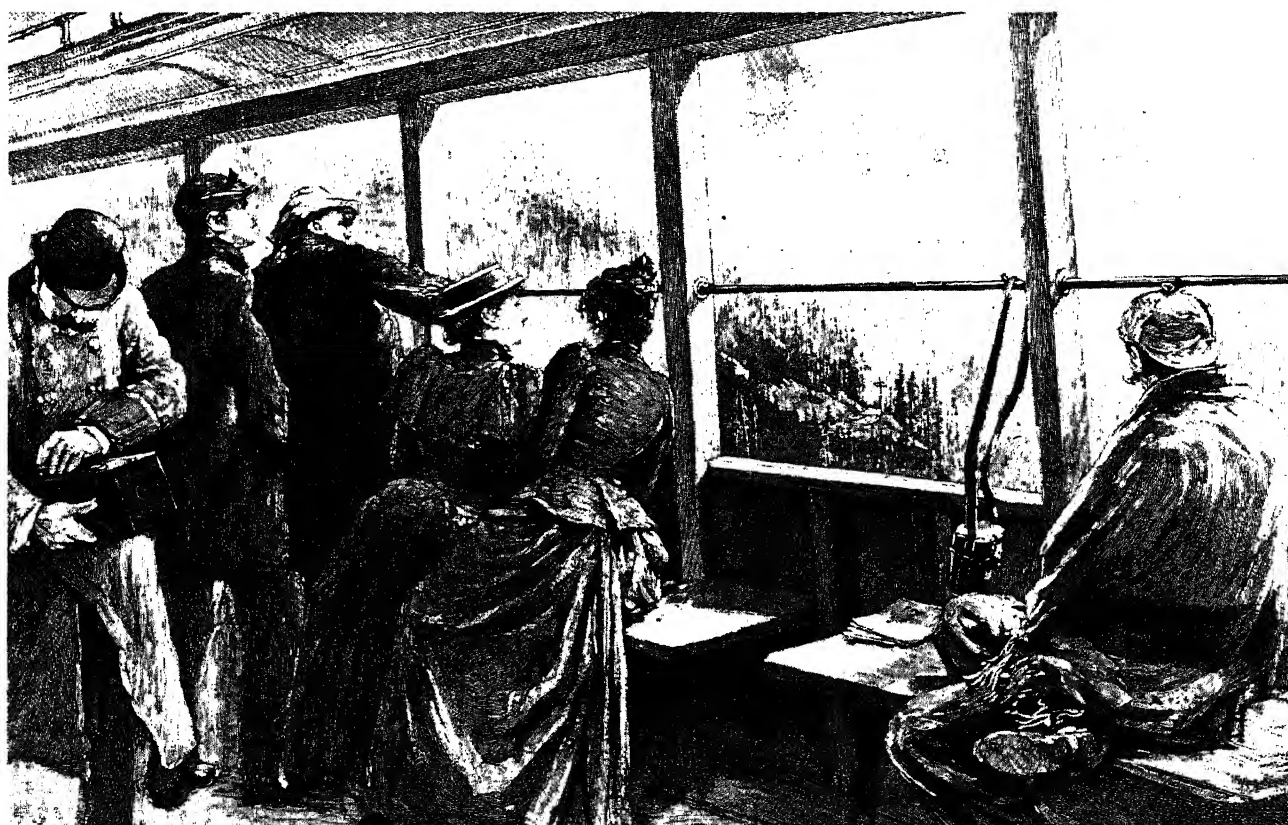


Typical depot master and ticket agent in a Burlington station in the year 1899, when tickets and mustaches were longer than they would be in twenty years to come. The depot master's signal lantern had not yet had its kerosene container replaced by an electric battery.



(Above) A passenger coach of the 1890's.

(Below) An open observation car in the Rockies, edifying *but* chilly.



From "Harper's Weekly," July 18, 1891



A Burlington parlor car in the early 1900's, when time had quieted the original charges of the anti-railroad Granger politicians that this kind of transportation was an added device for victimizing the public. In 1874 agitators declared that the roads compelled travelers to use parlor cars "by providing an insufficient number of ordinary cars, or cars which are so filthy and uncomfortable that men gladly pay the extra charge to escape them." Nevertheless parlor cars were popular, and the progress of railroading was continually away from the original one-class ticket and toward more expensive quarters for those who could afford them. The trend continued until the advent of the streamlined Diesel-motored train on the Burlington in 1934 brought such luxury to the day coach that second-class travel rivaled the parlor car even in the minds of the well-to-do.

(*Middle, right*) Merrill Hall, chief building of Doane College at Crete, Nebraska, in 1908, the liberal arts institution which, in 1872, was named for Colonel Thomas Doane (*top, right*), first superintendent and chief engineer of the Burlington and Missouri. Soon after Doane came west for the Burlington in 1869, his passion for public education led him to persuade the road's financiers to donate funds and more than 600 acres to locate at Crete a then homeless Congregational college. Doane gave \$10,000 himself to the college and left it a large bequest in his will. Doane introduced in 1871 wholesale planting of trees along Burlington tracks in Nebraska as windbreaks and foes of erosion, and also established nurseries which sold tree stock cheaply to farmers. This campaign was, for a time, a state-wide joke, "Doane's Folly," but was followed in January 1872 by J. Sterling Morton's famous resolution in the Nebraska State Legislature which established Arbor Day.



Courtesy Doane College

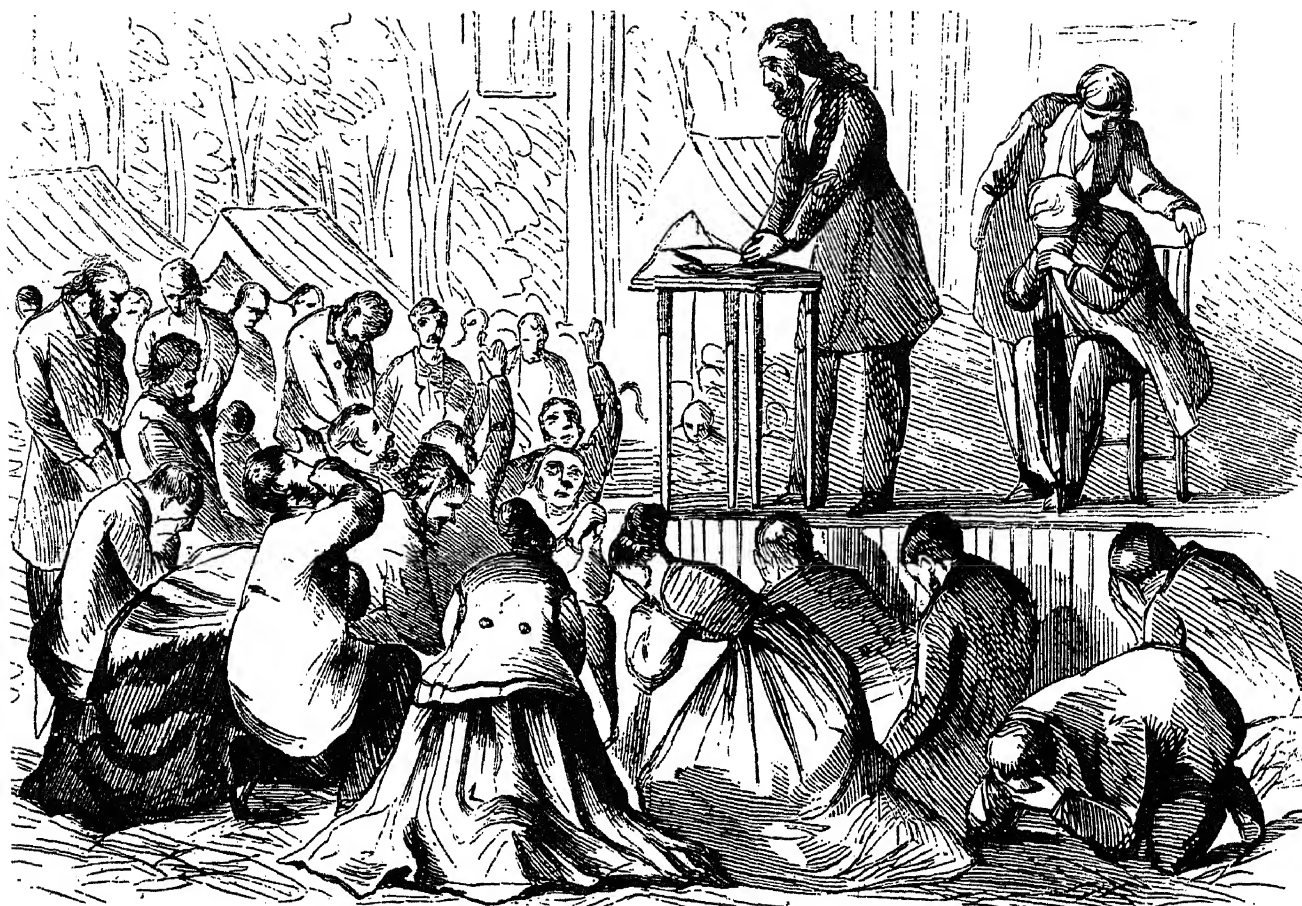


Courtesy Doane College

(*Below*) Grade school children at Seneca, Nebraska.



Courtesy Val Kuska, Omaha, Nebraska



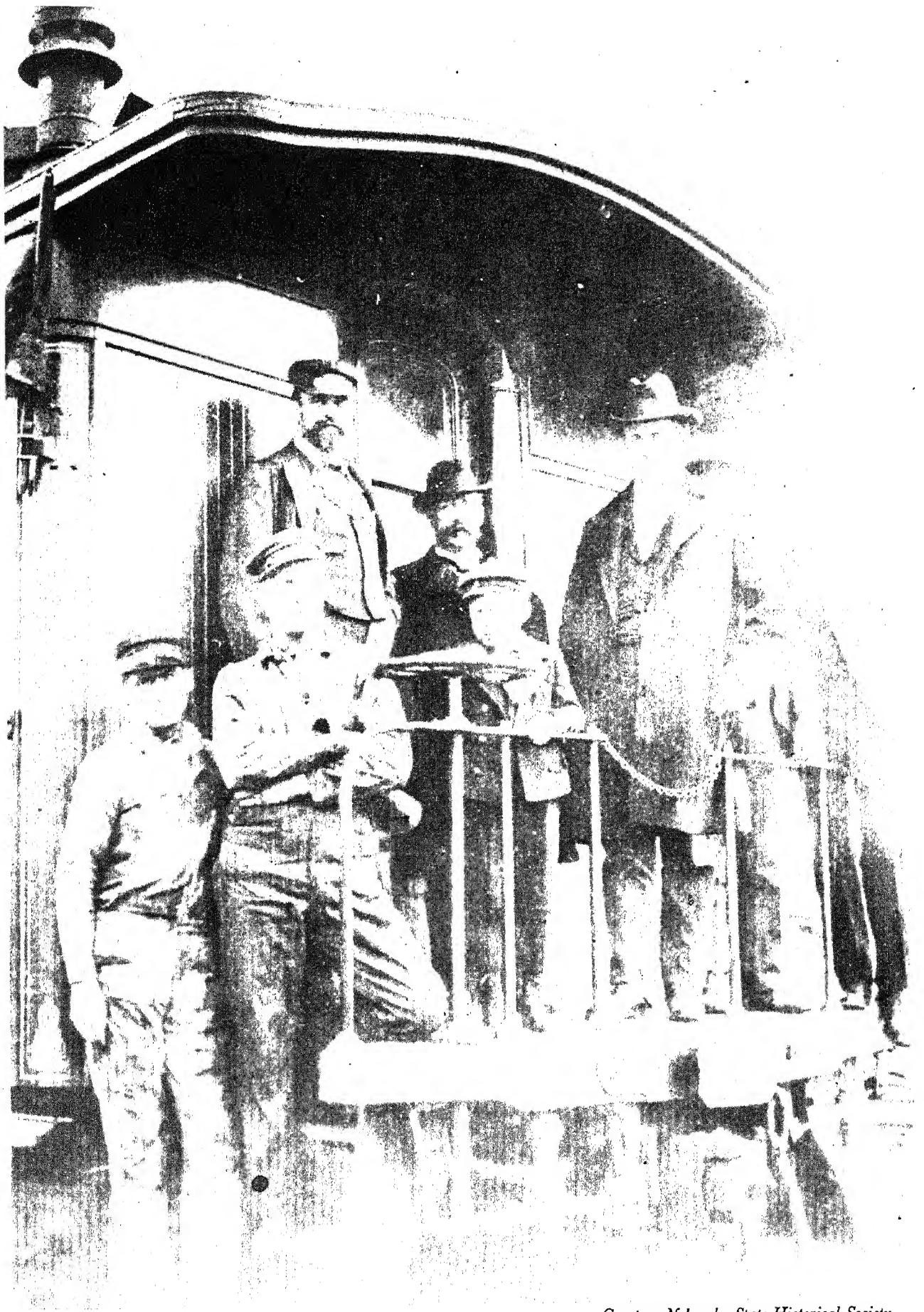
From "Harper's Weekly," August 10, 1867

Two popular rural institutions which, for better or worse, declined in the first three decades of the twentieth century — the religious camp meeting (*above*) and "Chautauqua Week" (*below*). The former suffered from increased public sophistication and criticism of emotional methods of the evangelists, and the latter's "cultural" program could not compete with the newly arrived motion pictures. (*Following page*) William Jennings Bryan, lecture king of the Chautauqua circuits.



Courtesy Nebraska State Historical Society

Chautauqua tent at Kearney, Nebraska.



Courtesy Nebraska State Historical Society

Bryan, as a resident of Lincoln, Nebraska, and as political leader, magnetic orator, lecturer, statesman, editor, was then the best-known figure produced by Granger states west of the Mississippi.

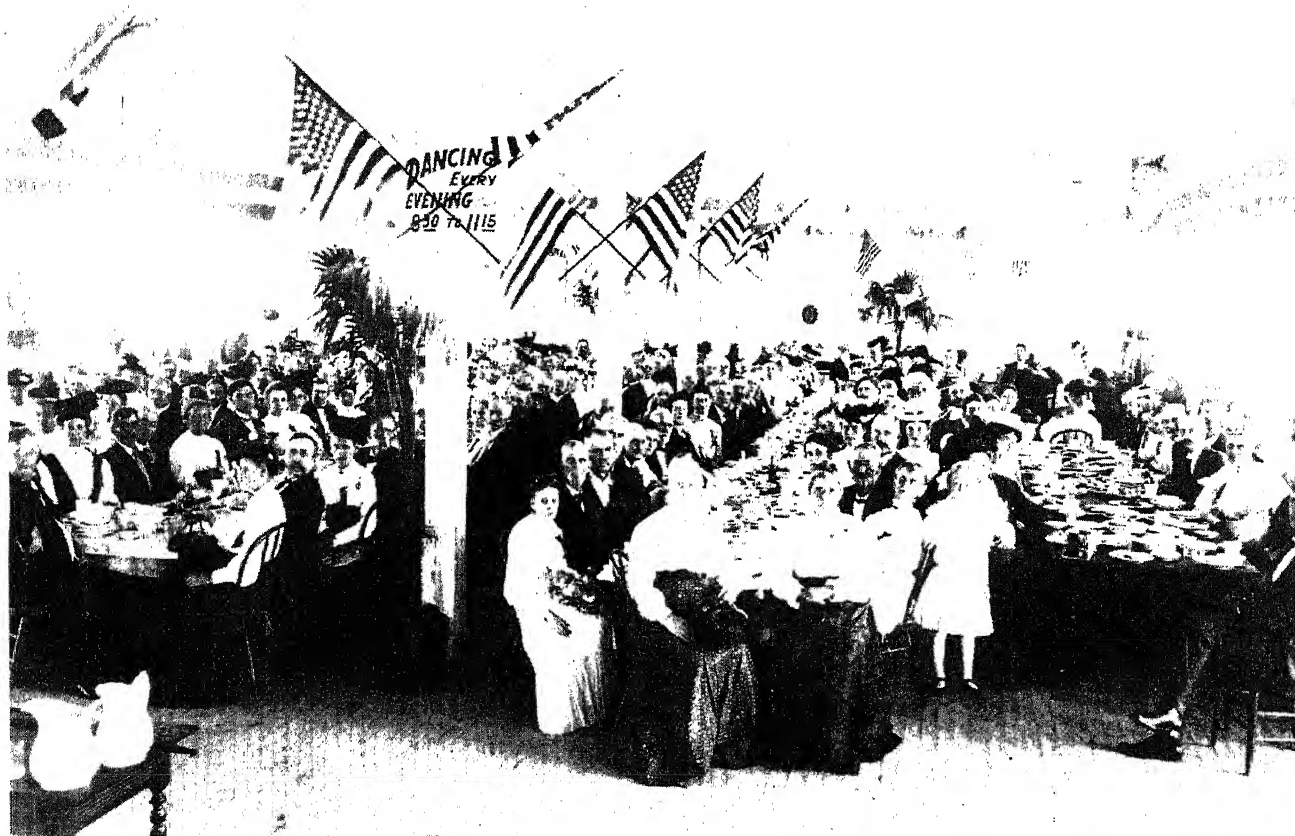


The railroads not only made the town of Hot Springs in Fall River County, South Dakota, among the southern Black Hills, but brought to the medicinal waters of the place farmers and cattlemen, with their families, from a wide area. The open pools, to which Indians and bears had come for centuries to soak away their aches and pains, began to be fenced in by 1885, and soon hotels made them a health resort and sanitarium center. Many farm women felt it permissible to don bathing suits and frolic sedately in an indoor health pool, whereas an appearance in similar attire on a beach would have been a clear case of immodesty.

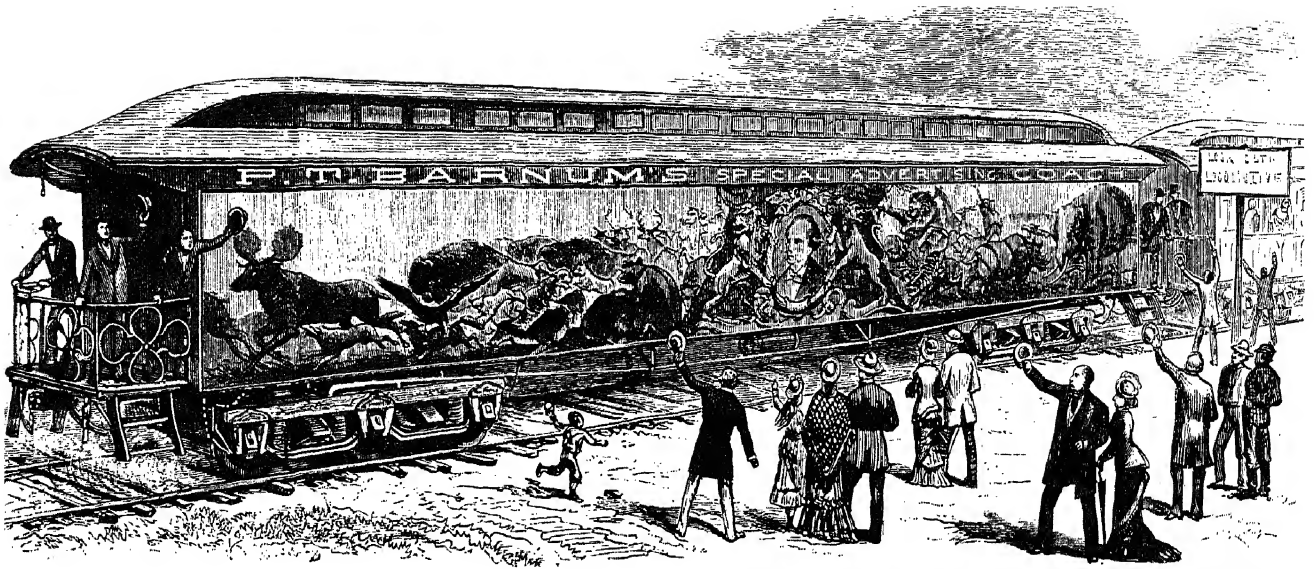


From "Harper's Weekly," July 18, 1874

Although in some sections of the West the first settlers began holding Old Settlers' Picnics as soon as they arrived, the average social affair of this extremely popular kind (*above*) was inaugurated around twenty years after the settlement of a community. With the coming of the railroads Old Settlers' Picnics (*below*) expanded from local neighborhoods to include tiers of counties and even states.



Courtesy Nebraska State Historical Society



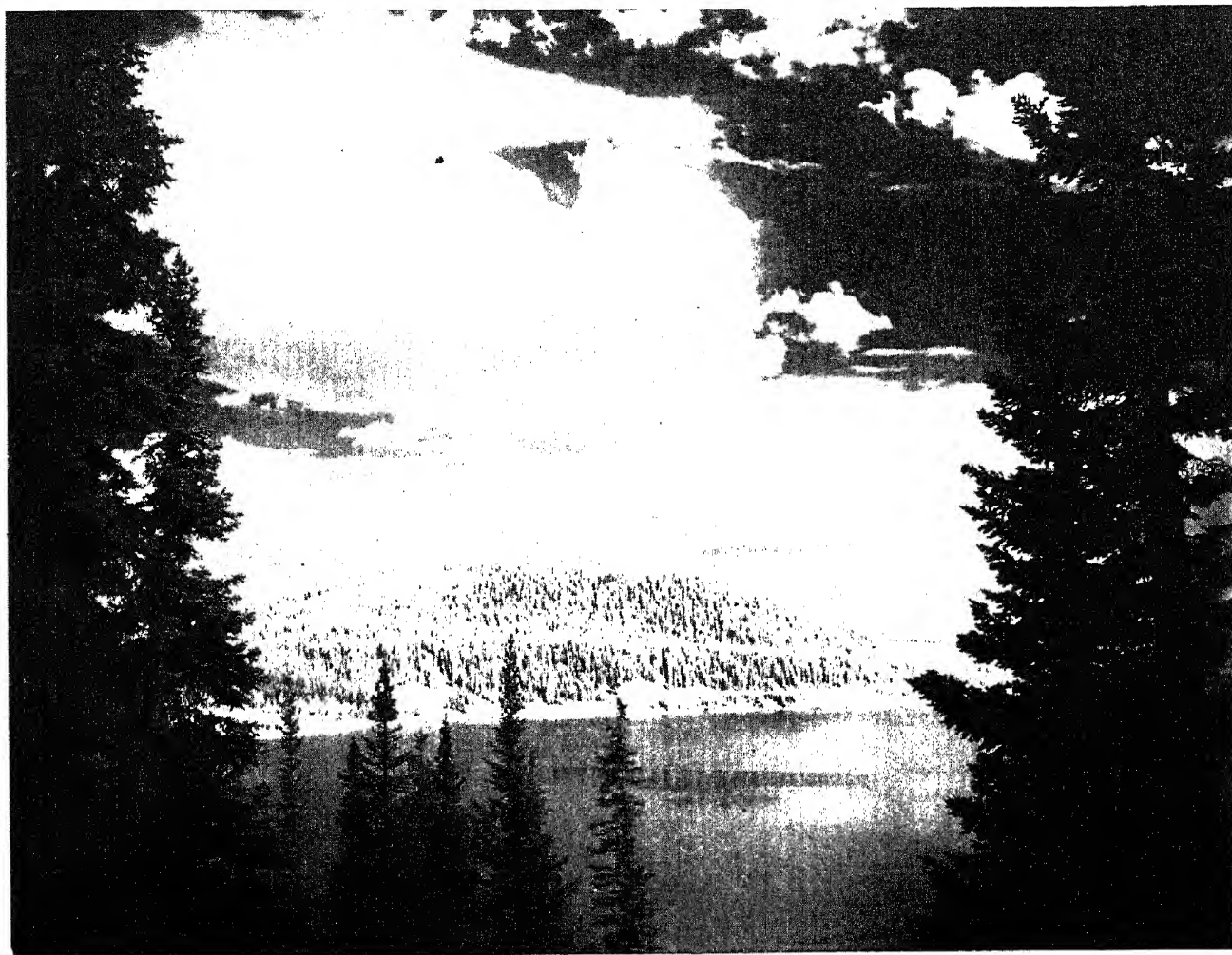
From "Frank Leslie's Illustrated Newspaper," July 27, 1878

(Above) In the 1870's the sight of Barnum's \$15,000 advertising car, heralding the approach of the circus, was almost as thrilling as were excursions to see the Big Top itself.

(Below) Sells Floto circus parade, Kearney, Nebraska, 1908.



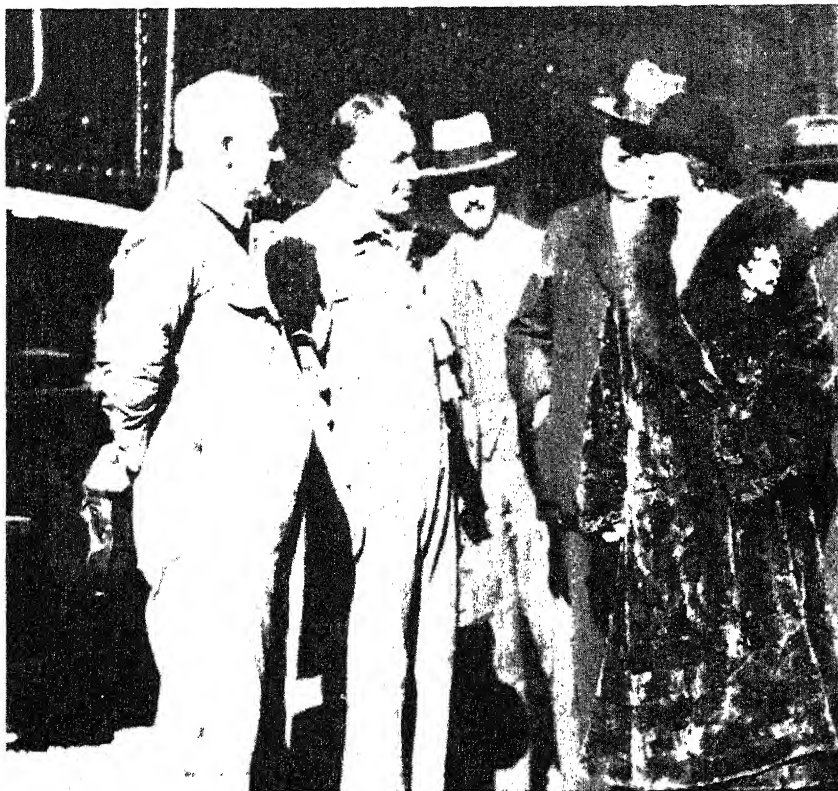
Courtesy Nebraska State Historical Society



Byerly Photo

The wonders of Yellowstone, which became a national park in 1872, had once been regarded as "tall-tale" fantasy of early trappers. Tremendous tourist business developed after the Burlington reached it through Cody in 1901, one of the road's most famous guests being President Calvin Coolidge in 1927. Coolidge is seen below, assisting his wife with some trepidation among the steaming geysers.





Queen Marie of Rumania, greeting the engineer and firemen of her special train, at Wind River Canyon, Wyoming. Edward Flynn, general manager of the Burlington, stands behind her right shoulder. Her son, Prince Nicholas, is at her right.

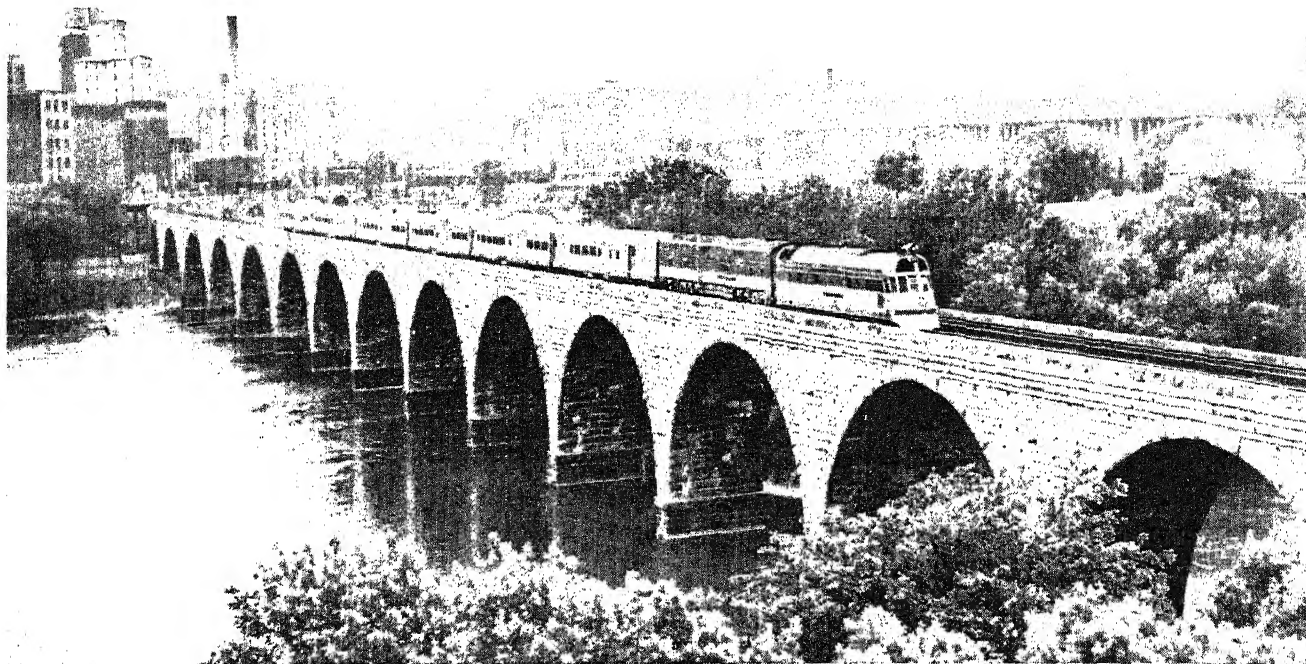


Diesel-powered 100-car freight train in the Black Hills.

CHAPTER SEVEN. EVERYWHERE WEST

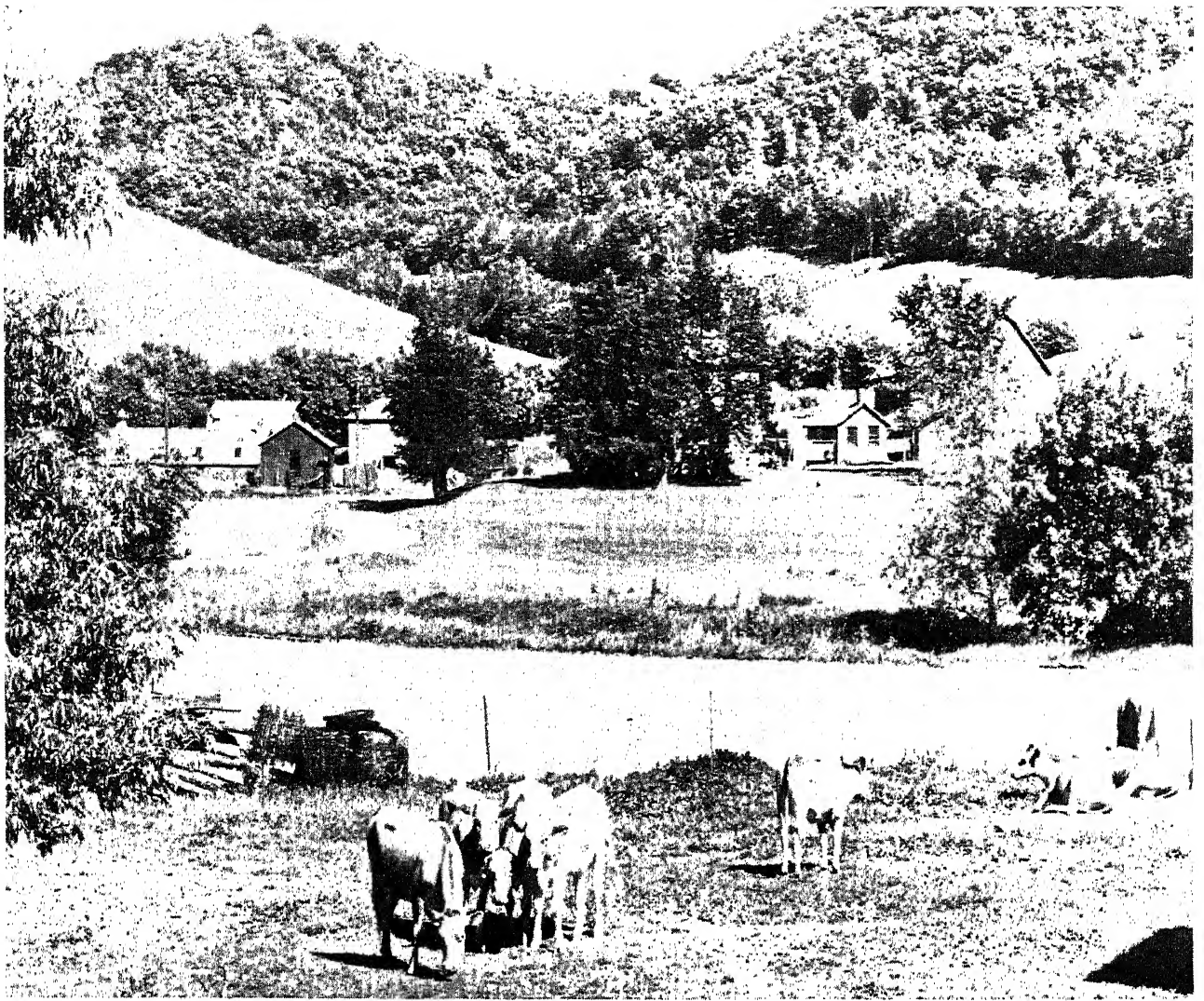
AS 1949 dawned, passenger travel on railroads was entering upon what seemed to be the era of its renaissance. The streamlined Diesel-motored trains — the Zephyrs — which the Burlington inaugurated in 1934 had been adopted as a new principle by all the major roads for their “crack trains” and were being increased year by year. An addition to the streamliners, the dome car (*below*) which the Burlington had introduced in 1945 was also spreading to other roads, with the result that passengers had not only the pleasures of the streamliner itself — greater speed, comfort and cleanliness — but an infinitely superior view of the passing scenery. Particularly was this increase in the sightseeing attractions of travel important to the Burlington, which, as its advertising slogan, “Everywhere West,” indicated, sent its trains through so much of the scenic portions of the Granger Country — along rivers like the Mississippi (*below*), through the Plains and the Mountains.



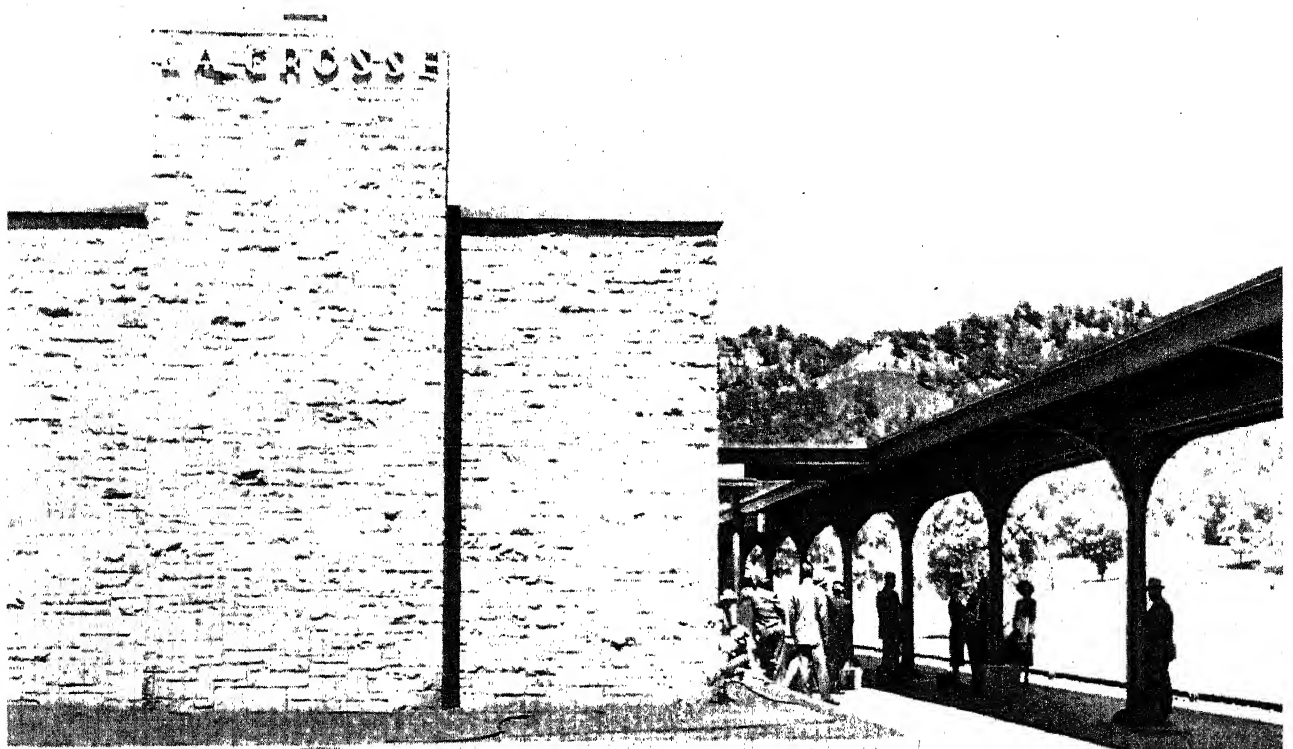


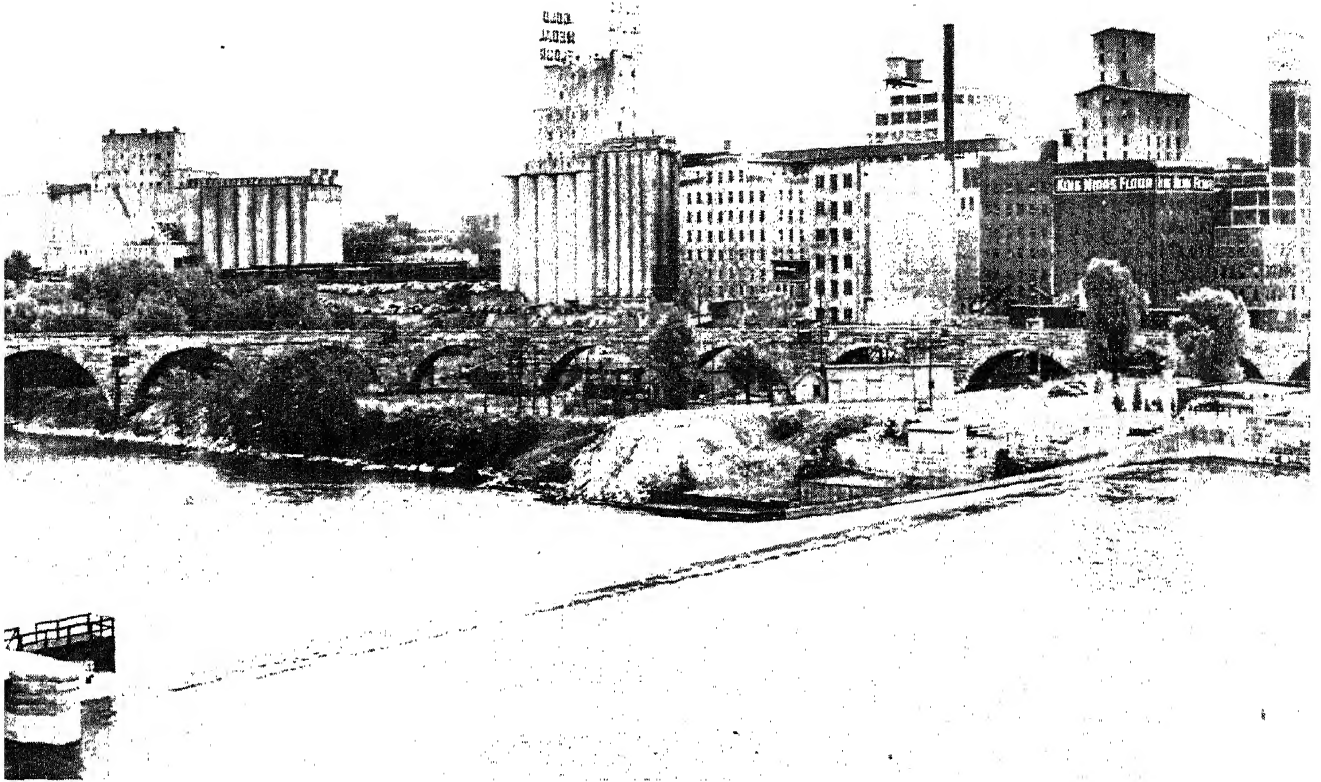
(Above) Dome train leaving Minneapolis (population, 550,000). (Below) April 18, 1934, christening of the first Zephyr at Philadelphia, where it was built. At extreme left, Ralph Budd, president of the Burlington, who fathered the idea of the streamlined Diesel-engined stainless-steel articulated train. Third from left, manufacturer Edward G. Budd (no relation), builder of Zephyr; fifth from left, Alfred P. Sloan, Jr., president of General Motors, maker of the Diesel engine; extreme right, William Irvin, president of U. S. Steel, maker of stainless steel.





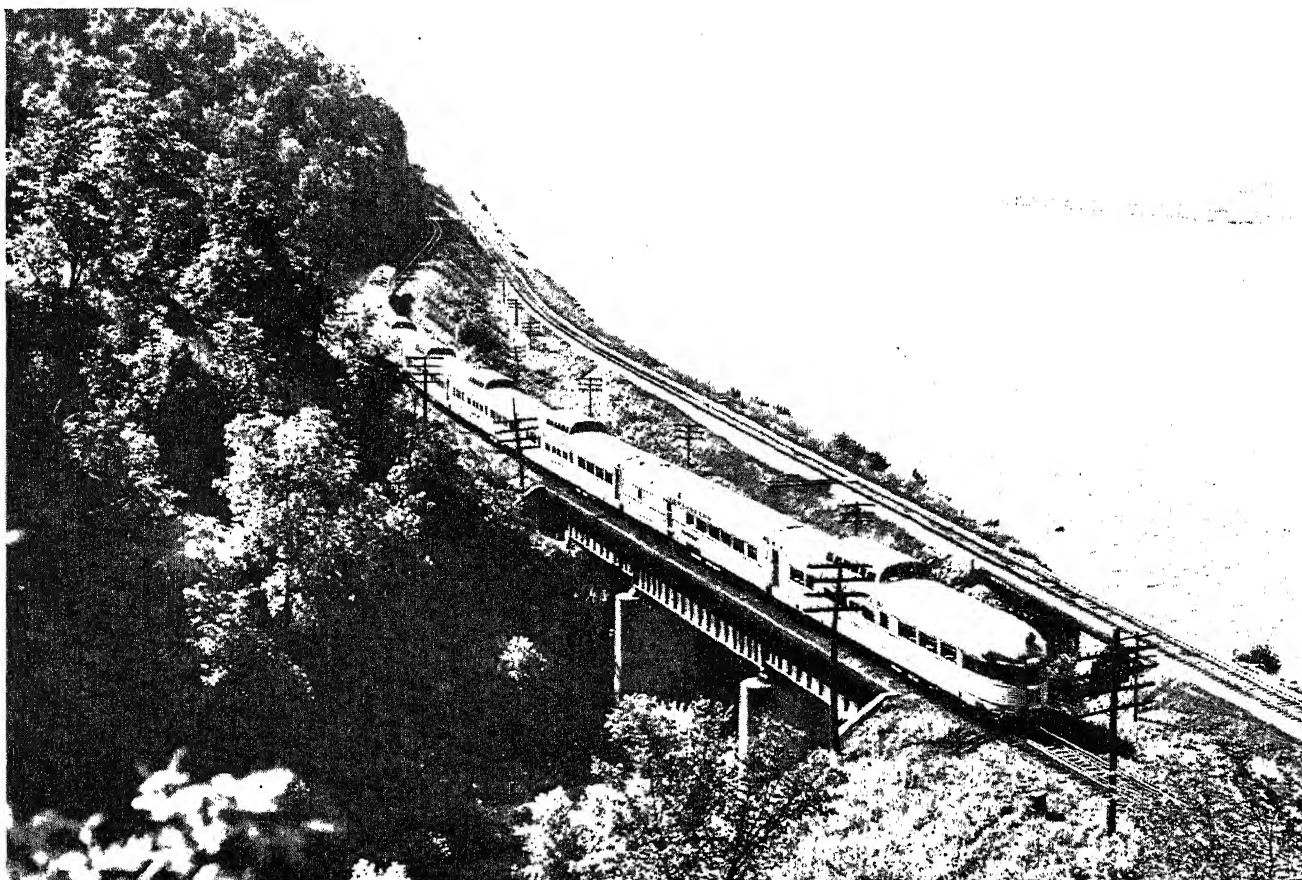
From dome cars the dairyland of Wisconsin floats by, and new stations, as at LaCrosse.





The titanic flour mills of Minneapolis and freight yards of St. Paul (population 350,000), with the Falls of St. Anthony no longer halting traffic.





Specially treated glass and air conditioning temper the sun's heat for the dome passenger, as the Zephyr glides through the Illinois prairie in midsummer up to the cooler northern cities like St. Paul and Minneapolis.





Photo by W. H. Lathrop

Contour plowing and strip cultivation not only halt erosion of the farmer's soil but add design to the landscape.



Photo by Parma L. Bernhard

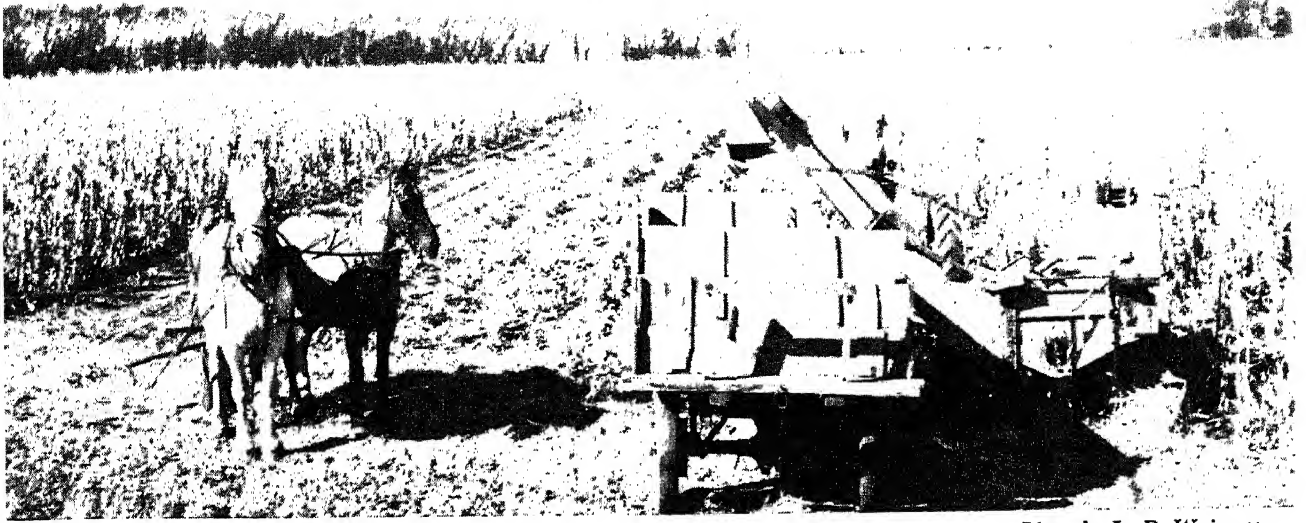
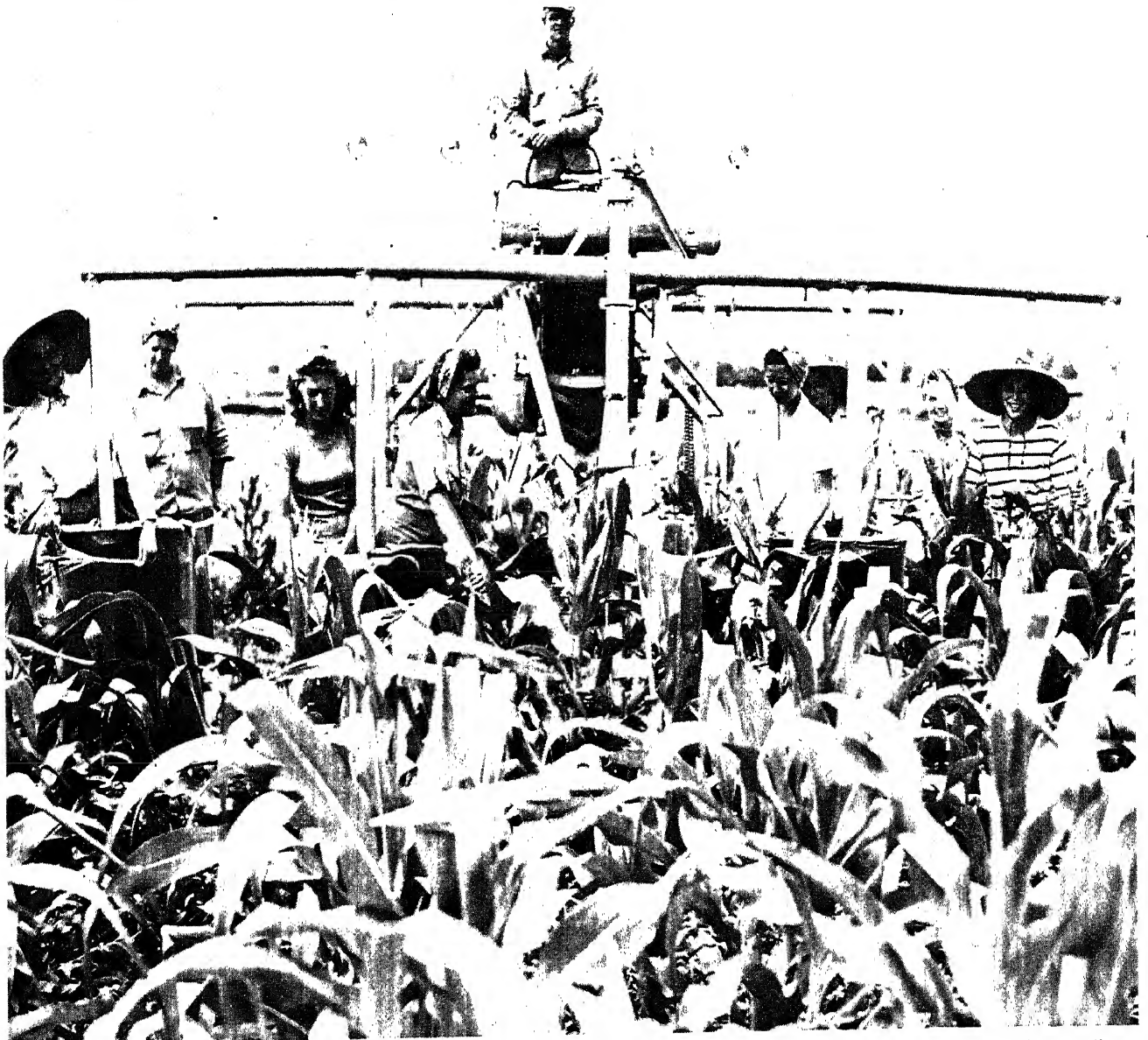
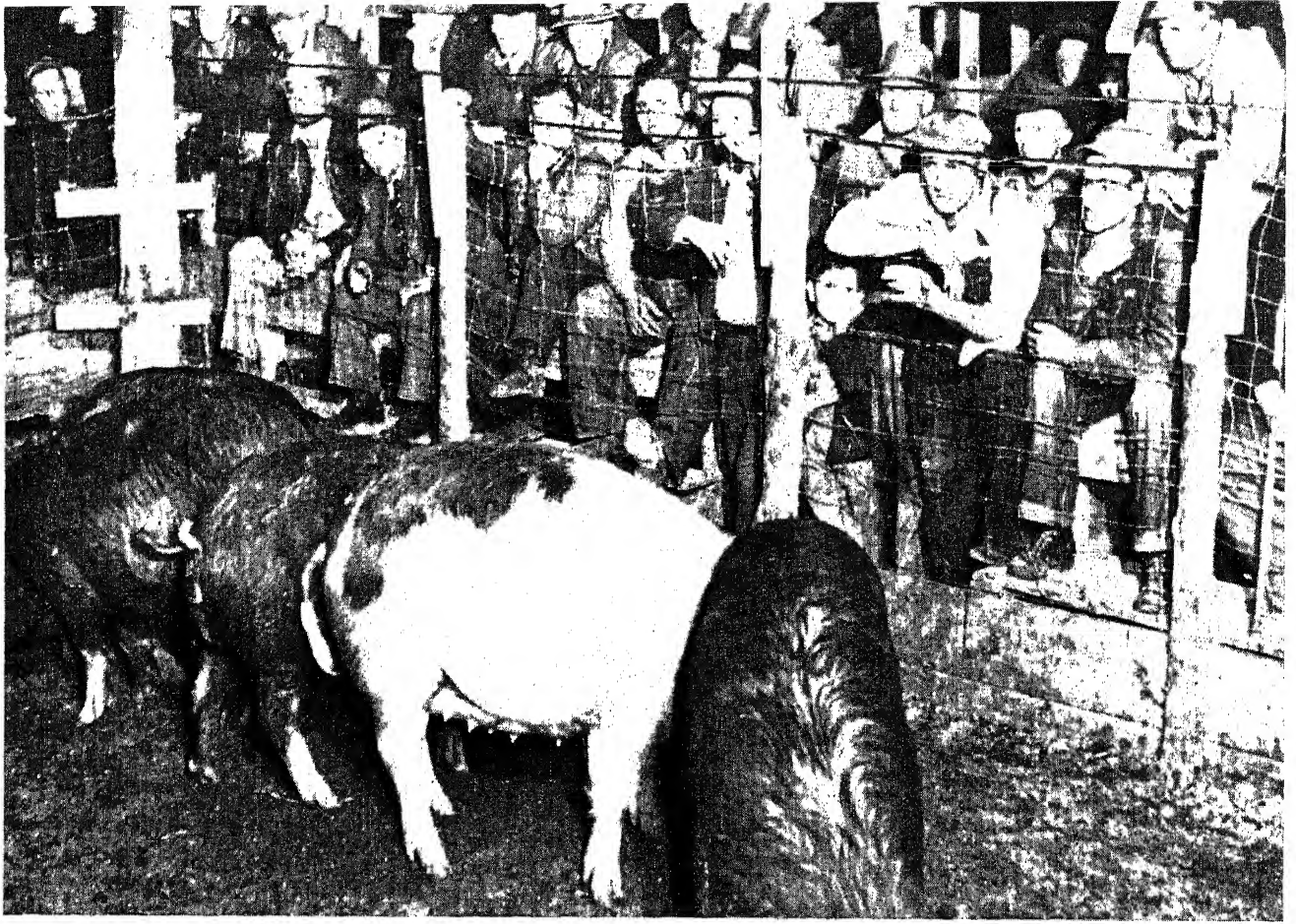


Photo by L. F. Waincott

Harvesting corn on an Illinois farm (*above*) which produced more than a 100 bushels to the acre. Iowa high school boys and girls detassel corn as part of the process of raising the hybrid seed which has revolutionized corn yields and profits in the Granger Country.



Courtesy "Des Moines Register"

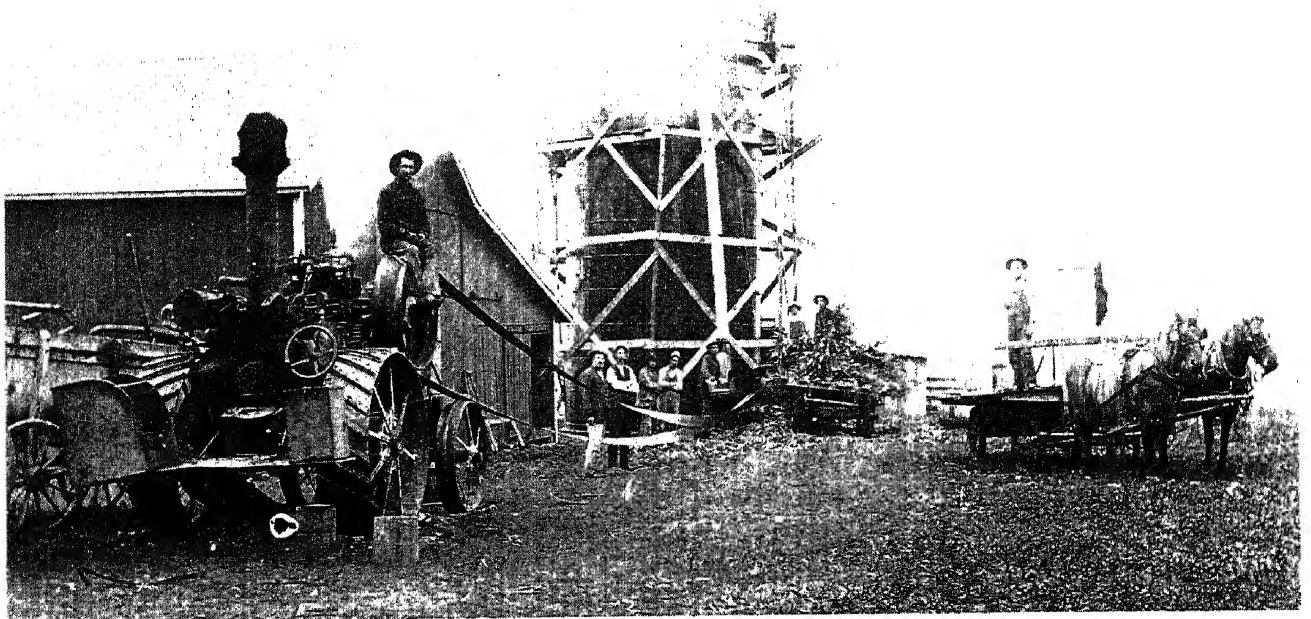


Farm auctions find bidders expertly appraising pure-blood breeds and the sensational and controversial "hybrid" hogs developed in Minnesota.



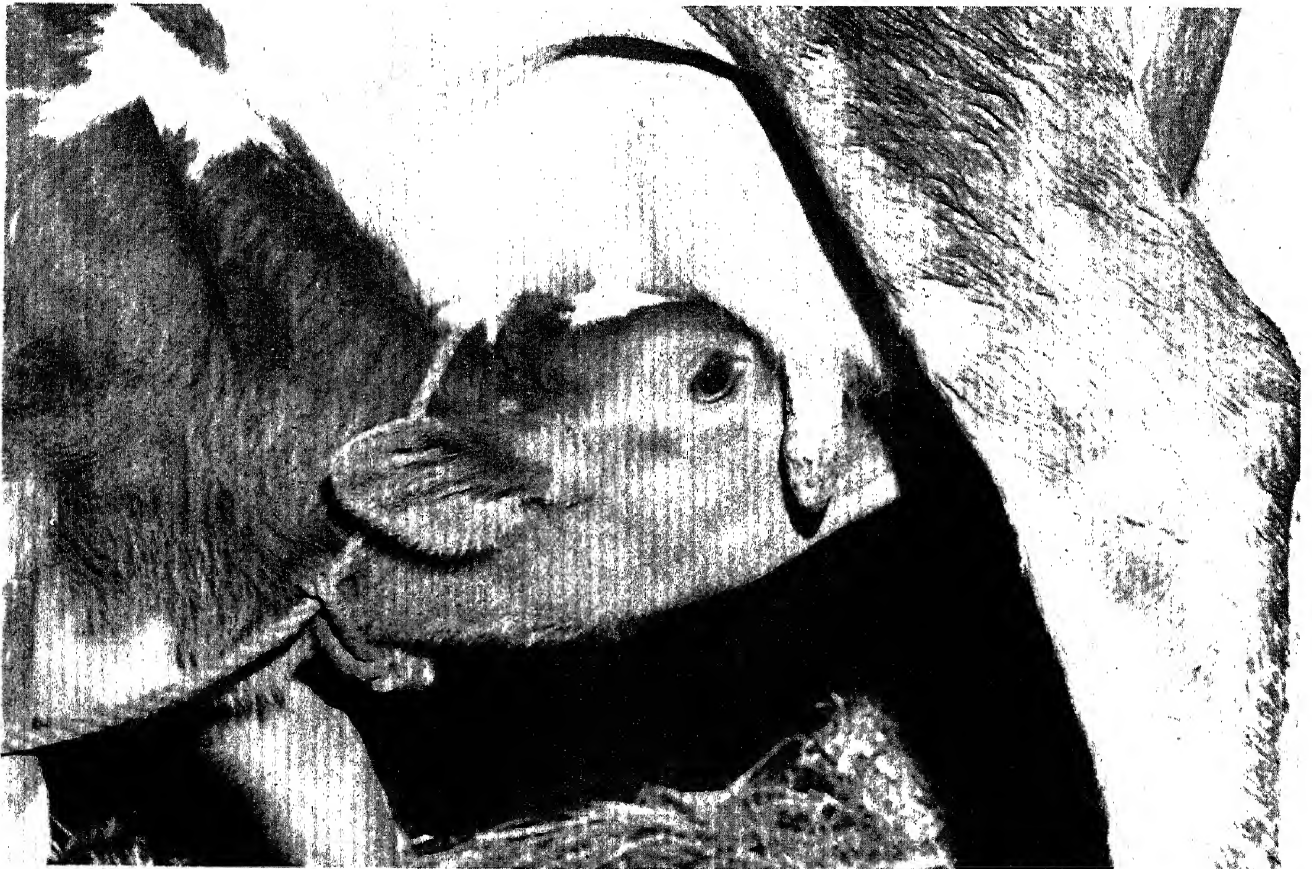


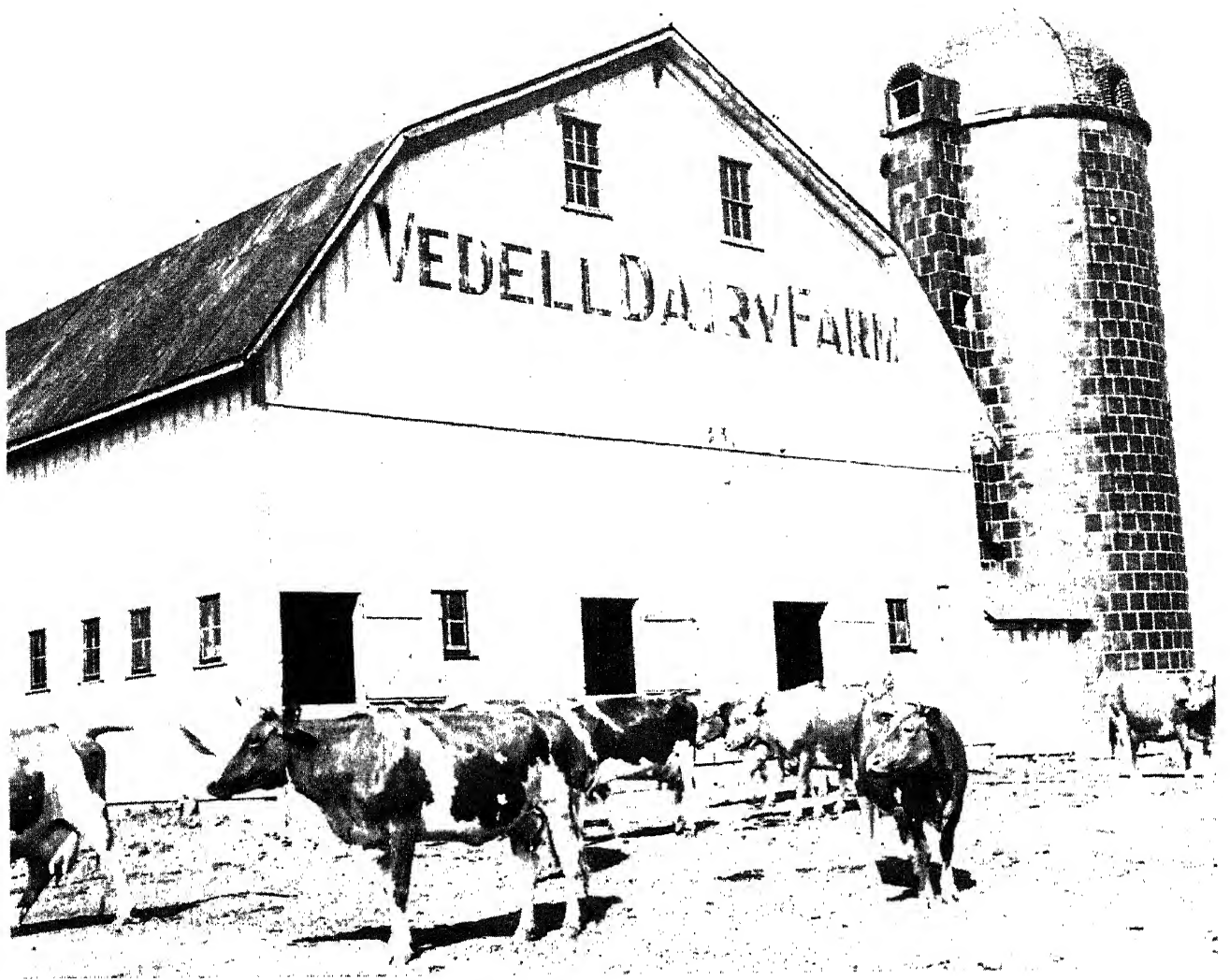
(Above) County Farm Agents, once scorned as theoreticians, now have the ears — and appreciation — of grangers, everywhere West, at least. (Below) Filling silos near St. Joseph, Missouri, in the late 1920's. Burlington has actively promoted the use of silos since the 1880's.





Scientific feeding has increased livestock production enormously, but the all-important start is still as Nature intended.





Production of milk and eggs diversifies the farmer's business and hedges against failure of his crops.





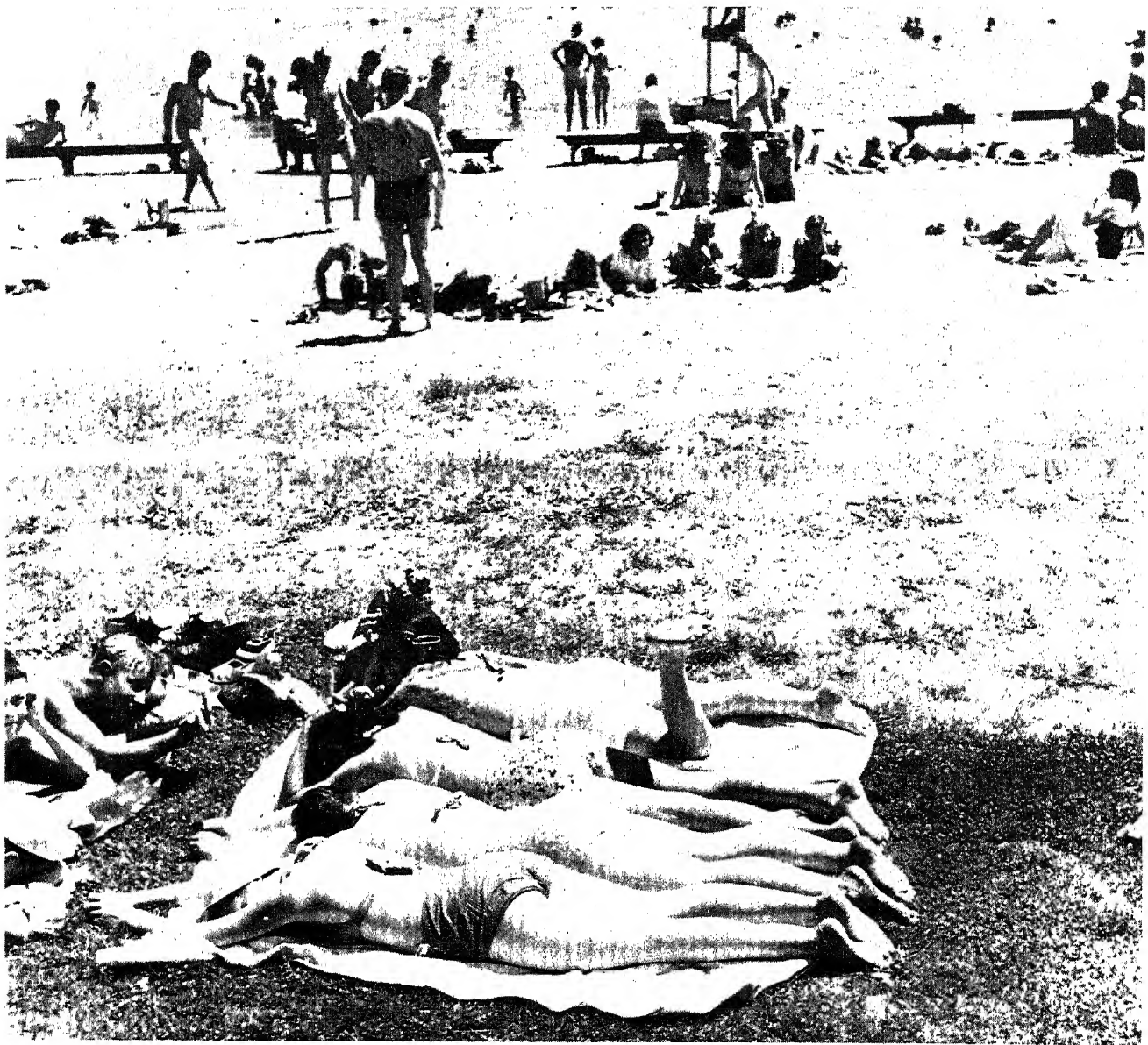
Population of village squares on pleasant afternoons in Granger Country increases, as at Canton, Illinois (*above*), due to steady progress in longevity. (*Below*) Although experts differed on the philosophy and the cost of WPA during the depression of the 1930's, as at Seymour, Iowa, in March 1934, some permanent improvements resulted.





Sunday school (*above*) and preaching (*below*) at Colbrook Christian Church near Galesburg, Illinois.





Fashions in bathing suits, bubble gum, ice cream cones change at Lake Storey Picnic Grounds, Galesburg, Illinois, as quickly as at Coney Island, New York.





Grade school picnic, Knoxville, Illinois (*above*). William Rockhill Nelson Gallery of Art (*below*), left to Kansas City by publisher of famous *Kansas City Star*.





Kansas City Union Station with city, population 450,000, in background (*above*).
Street evangelist, St. Louis (*below*).





Night view of the Union Station at St. Louis. The city, population 900,000, still has, for all its modernity, probably a deeper hold on the affections of tributary areas than any other large midland city. Until capture of the Middle West and West by the railroads which built Chicago, St. Louis, as the great port for Mississippi River steamboat traffic, seemed to be the destined metropolis of the regions between the Appalachians and the Rockies. St. Louis became in time a huge railroad center but Chicago had already been established as the railway hub and, as such, the commercial capital of the American Interior.



(Above) Ticket office, Union Station, St. Louis. (Below) Crowds watch and occasionally imitate, unconsciously, monkeys in St. Louis Zoo.



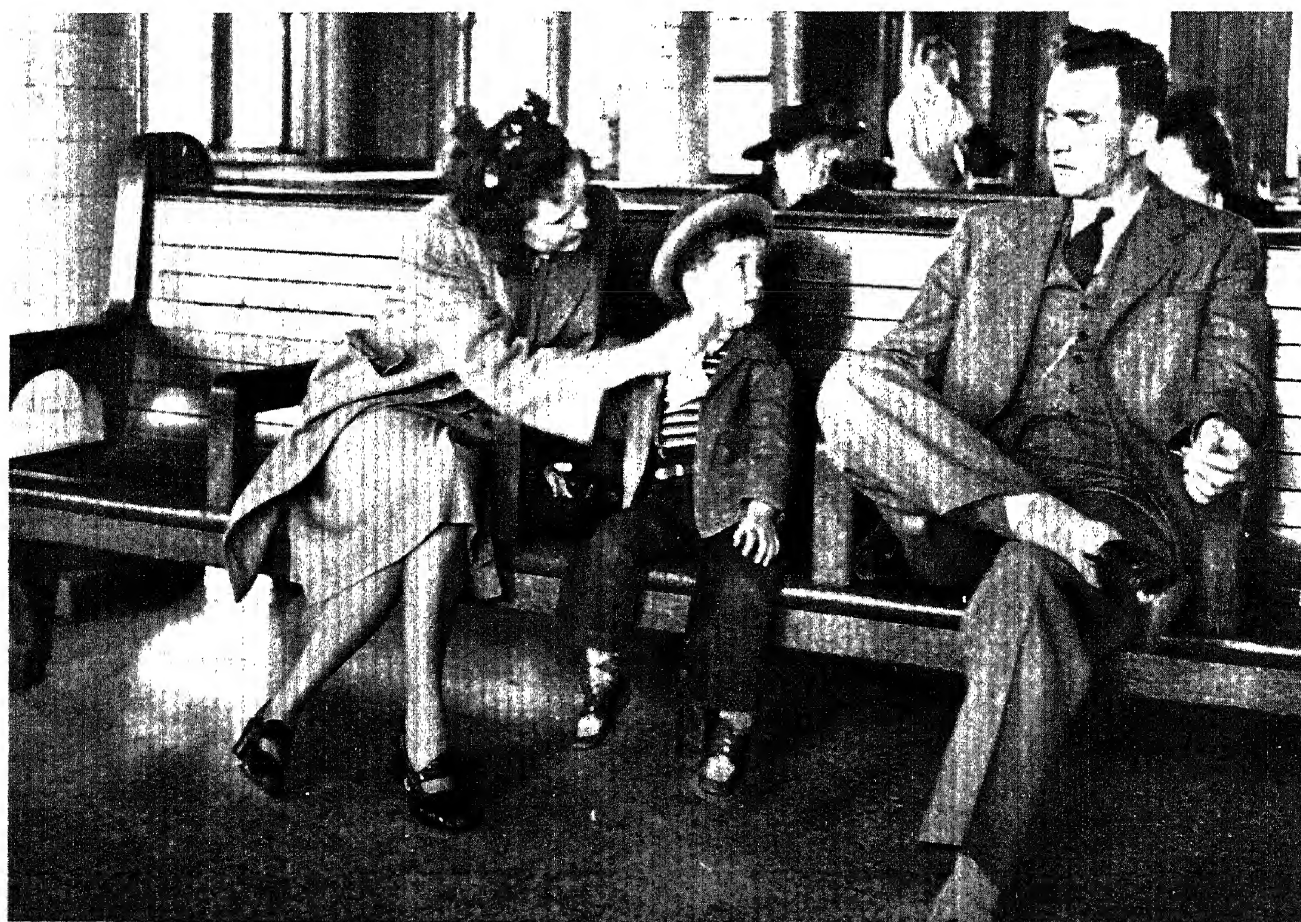
Peach orchards and "peach queens" in southern Illinois, where the blossom scene is a festival and spectacle. The Burlington, which went into southern Illinois primarily to transport coal, hauls out annually heavy tonnage in peaches and apples.



Chicago Tribune Photo



Farewells heavy with heartache, and meetings fraught with hostility, at the Burlington station, Creston, Iowa.





Scenes at depot at Burlington, Iowa, the town from which the road took its name. Although an effort was made to nickname the road "the Q" after Quincy, it failed and popular usage fixed it as "the Burlington."





Hog Butcher for the World,
Tool Maker, Stacker of Wheat,
Player with Railroads and the Nation's Freight Handler . . .

*From "Chicago Poems" by Carl Sandburg. Copyright,
1916, by Henry Holt and Company, Inc.*

Chicago as the creation of the railroads and the oceanic sweep of farm acres around it always haunted the greatest poet of the Granger Country, Carl Sandburg, himself the son of a Swedish immigrant who worked in the Burlington shops at Galesburg, Illinois. And the dependence of the city's skyscrapers upon the prairies — "the milk of its wheat, the red of its clover" — and upon the railroads running West, upon locomotive firemen waving to corn huskers coming home through the red sunset, the link between Chicago and the small towns and the farm, has always run through Sandburg's books of verse like a blue river through a green land.



(Above) Ticket window, Chicago Union Station. (Below) Waiting in Chicago, for the Burlington and Northern Pacific North Coast Limited.



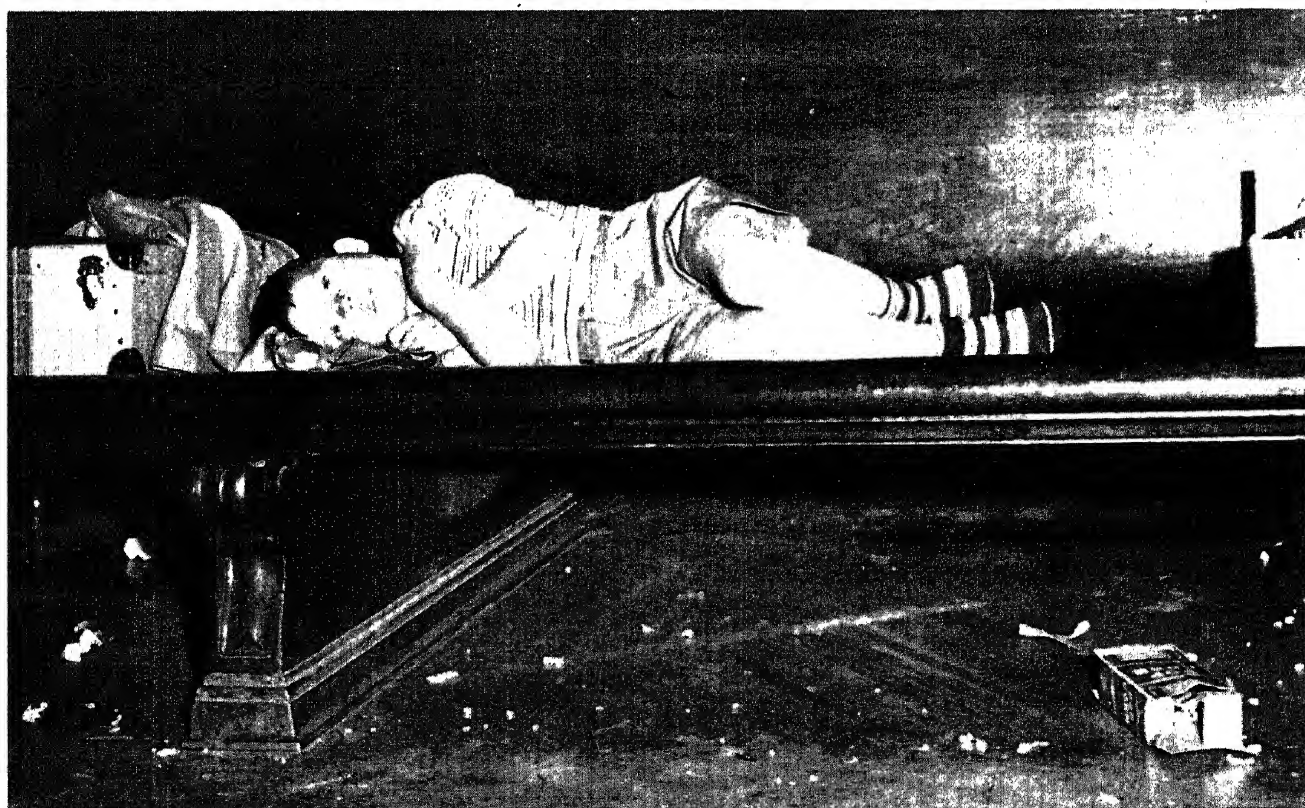


Changing trains and diapers, Chicago Union Station.





Daily average of "through" passengers in Chicago's railroad stations exceeds 60,000.





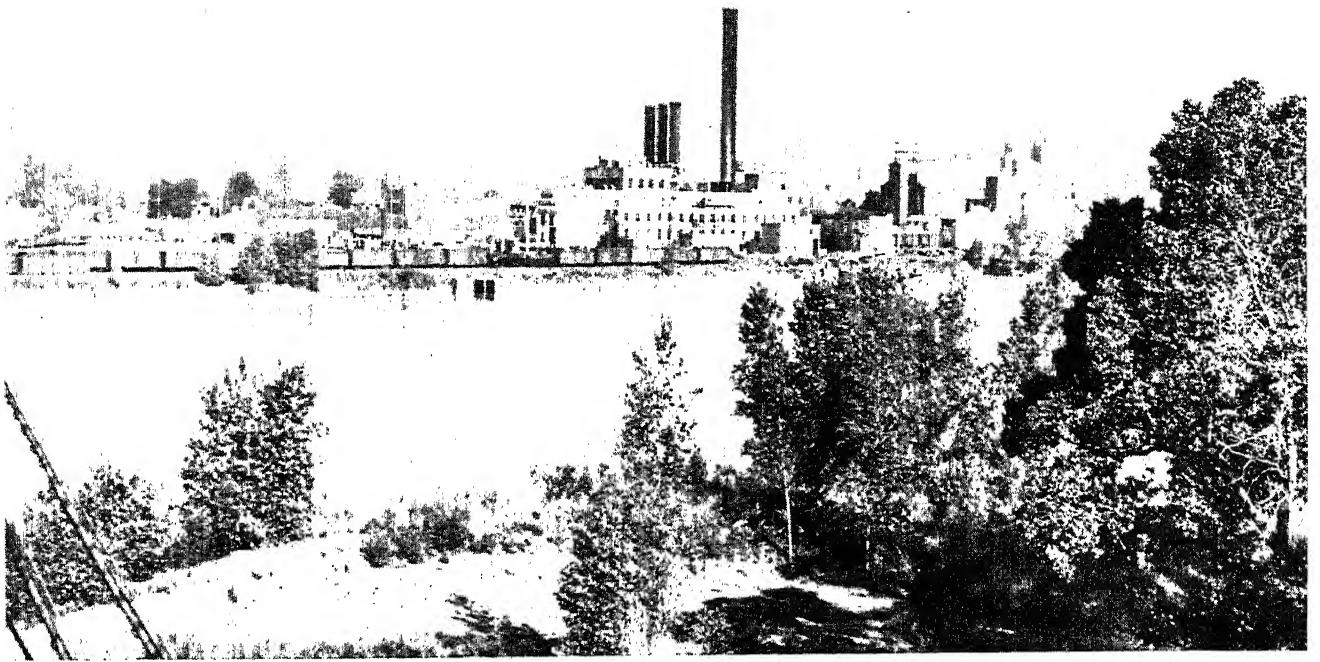
Suburban passengers between Chicago and Hinsdale, 16.9 miles out on the Burlington. The road handles approximately 12,000 a day.





(Above) Breakfast while crossing the Missouri at Omaha.
(Below) Street interview for radio in Omaha, city of 270,000.





(Above) Omaha today, processor of limitless agricultural products, including eggs which are being cracked (below) for drying and powdering.



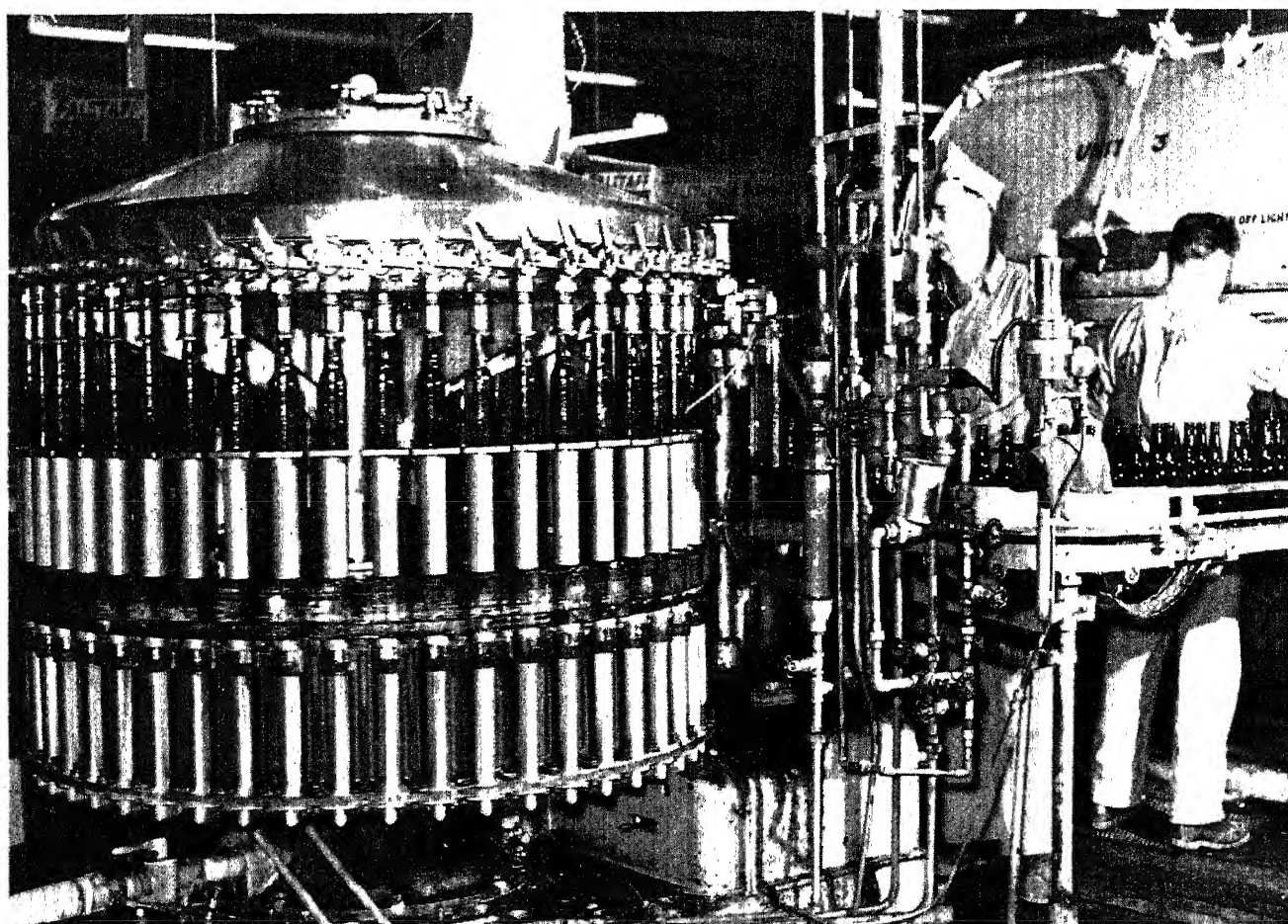


(Above) Where cowboys once scorned the milk cow, farmers today pour Grade A milk into Lincoln, and (below) keep Omaha butter factory busy with its huge churns, scientific packing and refrigeration.





(Above) Assembly line in Omaha permits swift plucking, disemboweling, cleaning, dismembering, packing and freezing of poultry. Prairie cereals become the beer which is being bottled and capped below.





Farmer in town; Saturday afternoon.



Nebraska State Capitol Building at Lincoln — architecturally, a historic break with the Mediterranean classic fashion for such buildings in the United States. Marshal Joffre of France was guest of honor when ground was broken for the capitol on April 15, 1922.



Age and youth await street busses
and railroad trains in modern
Lincoln, city of 100,000.





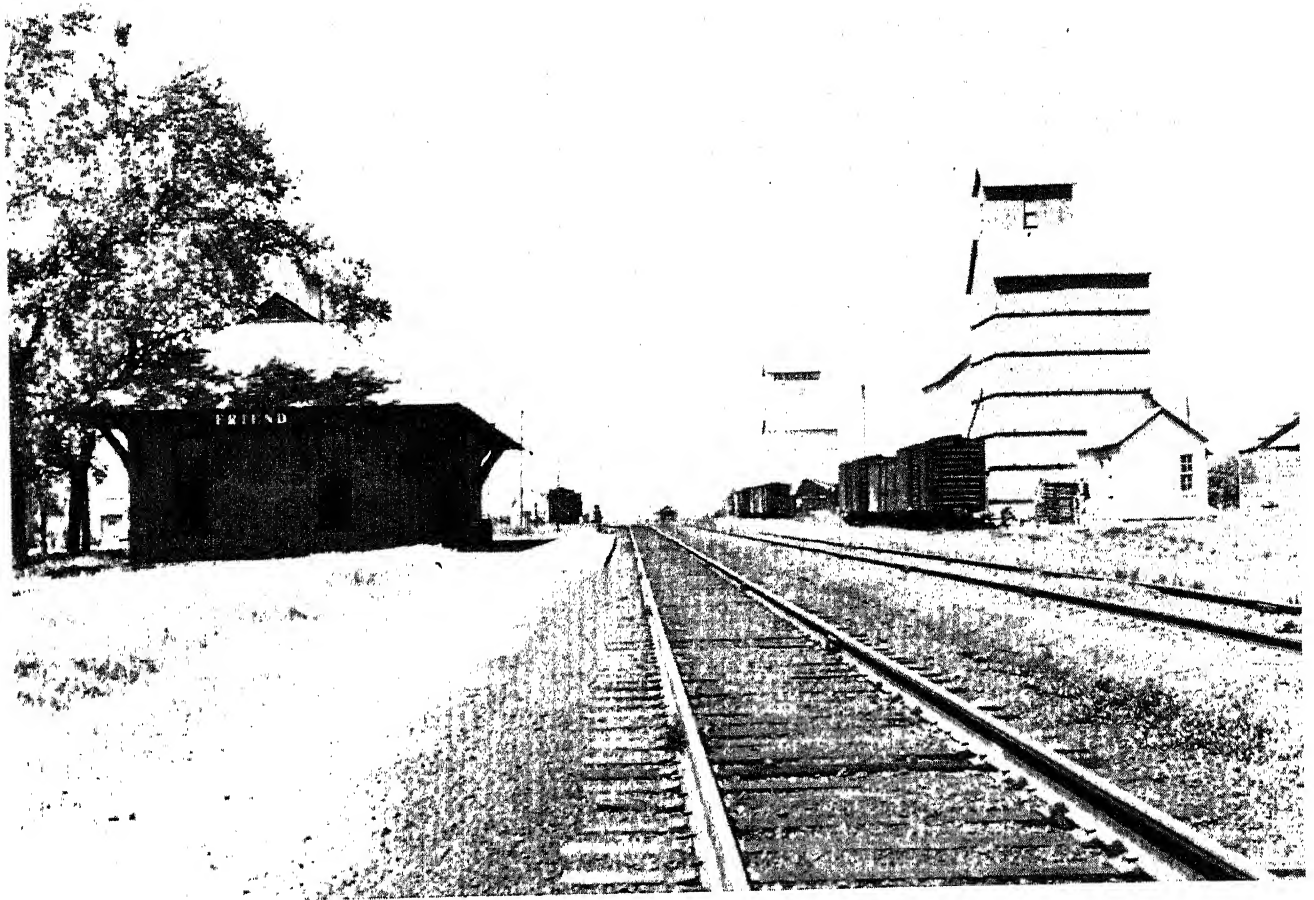
(Above) University of Nebraska at Lincoln.
(Below) One-room schoolhouse near Crete, Nebraska.



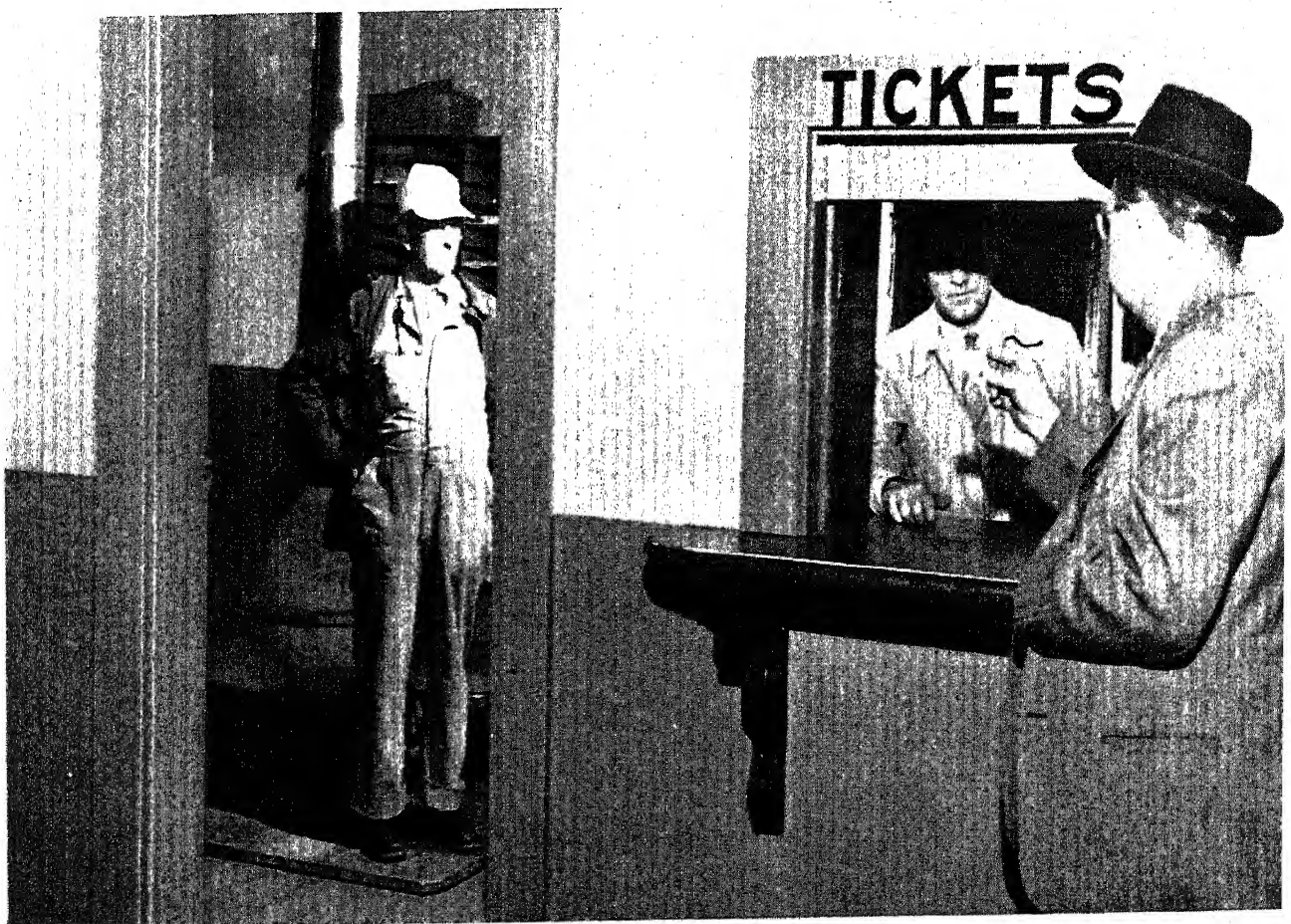


(Above) Interior of one-room schoolhouse.
(Below) Playground of consolidated school at near-by town of Friend.





Typical Granger Country town of 1937 is Friend, which grew up on the Burlington in Saline County, in eastern Nebraska.



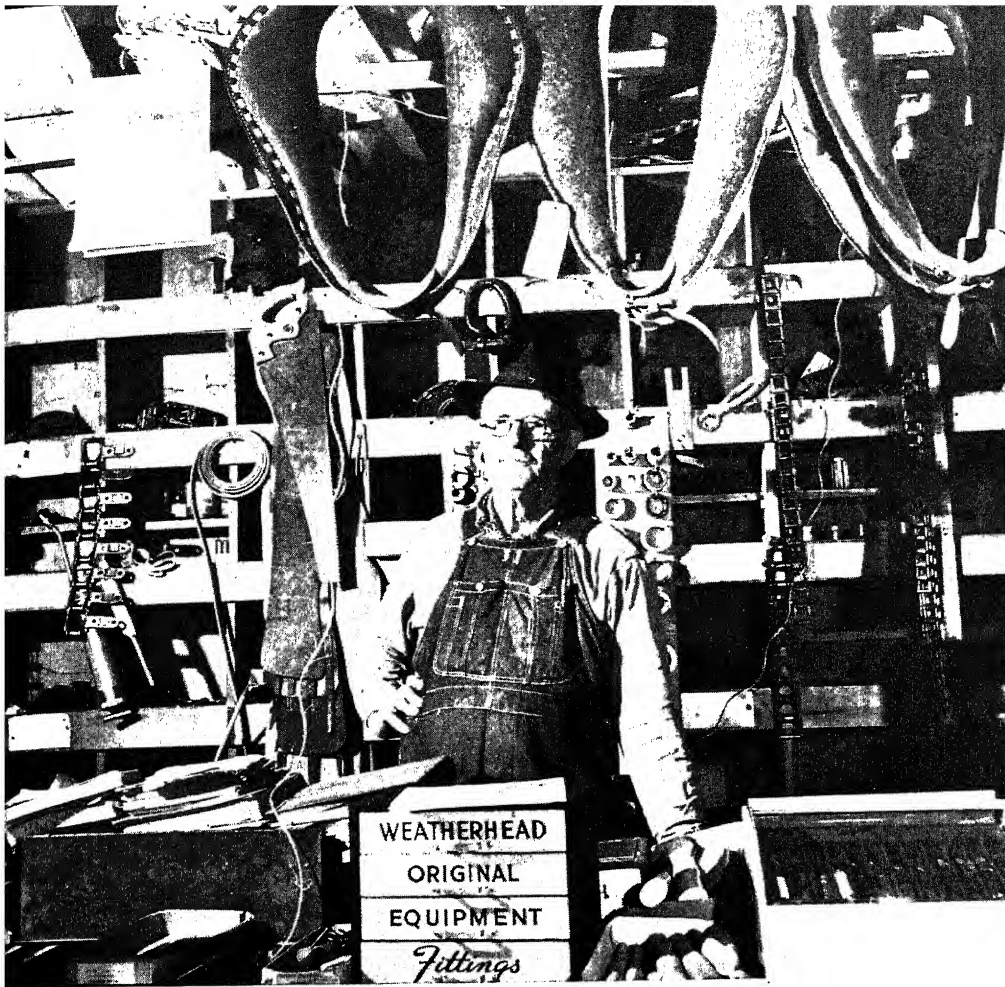


(Left) Lunch counter at
sale barn where weekly
livestock auctions are
held. (Below) Main
Street scene, Friend.





From front-porch rocking chair a resident looks approvingly upon Friend and its neighborly people.



At left, proprietor of Friend general store exhibits, side by side with items of ultra-modern farm industry, horse collars which linger on, a holdover from their pre-tractor heyday.



Farmer backs truck up to hog chute at Burlington tracks at Friend and shoos timid porkers down runway. In a few hours they will be in stock cars rolling toward the packer's knife.



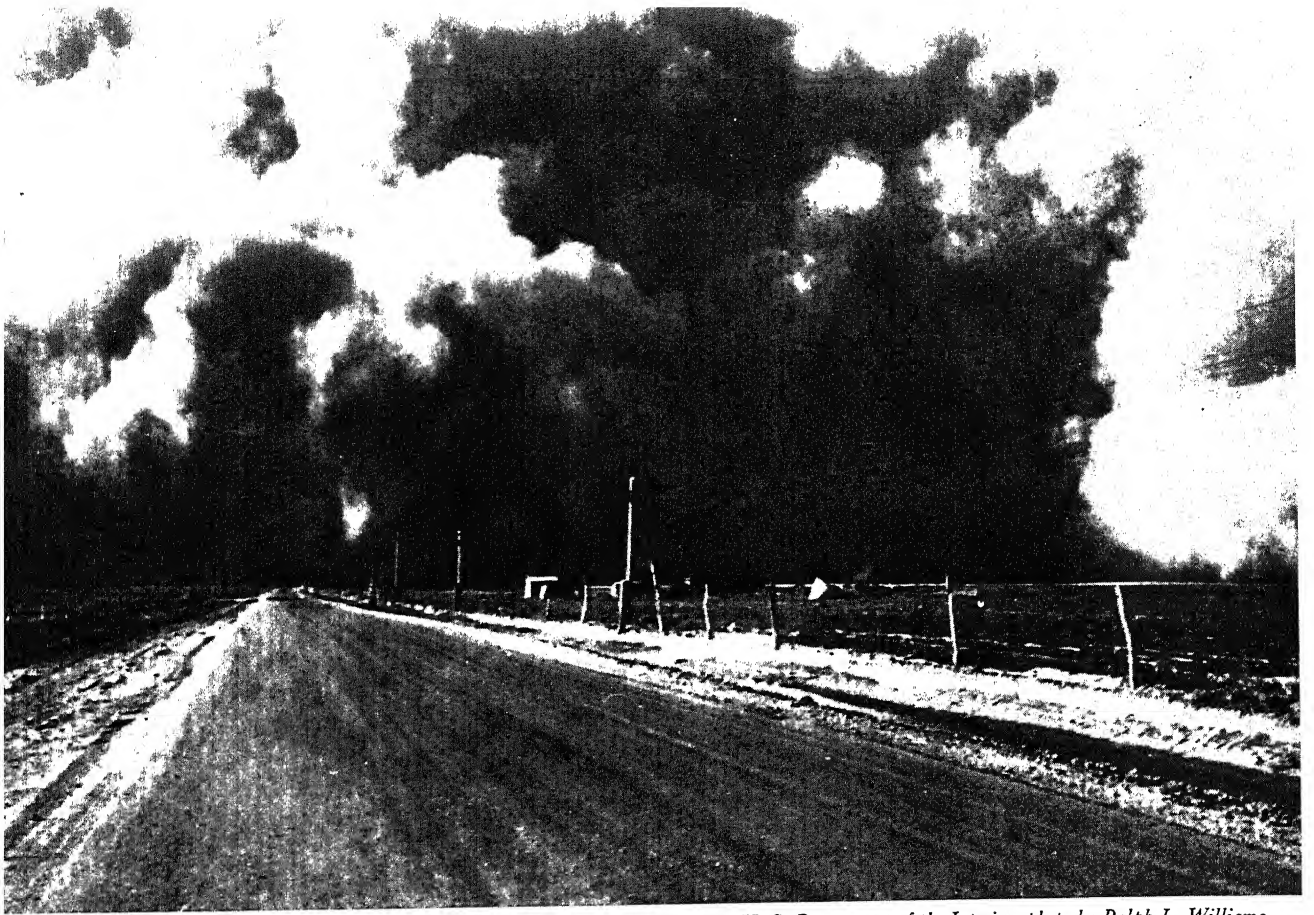
(Above) Monday morning at Friend.
(Below) Irrigating sugar beets, one of the chief crops of Nebraska.





(Above) Range cattle "finished off" at feeding lot near Scottsbluff, Nebraska, before shipment to packers at Denver, Omaha or Chicago. (Below) Hogs soon to be rail-roded from Nebraska farm to Omaha yards.

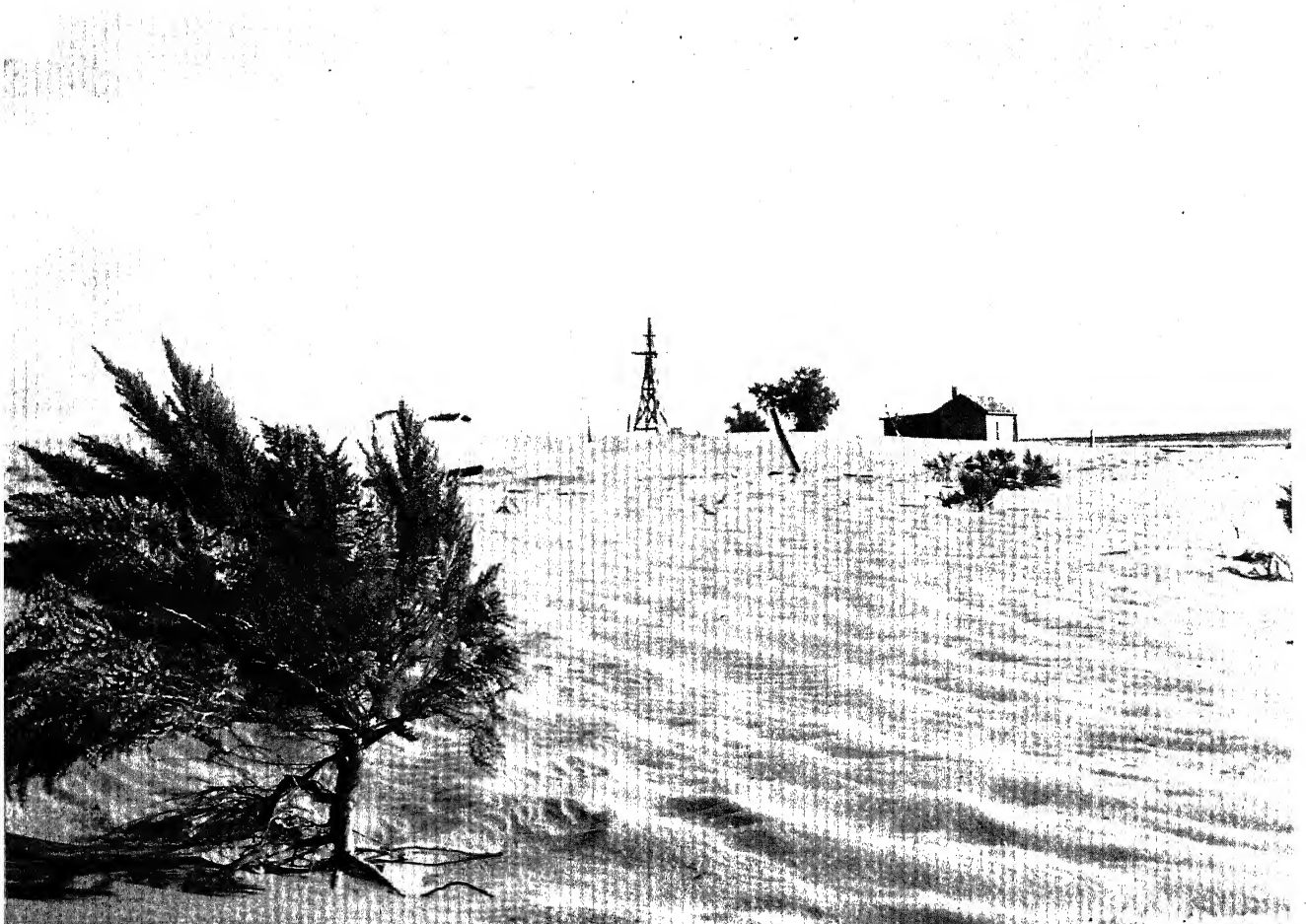




Courtesy U. S. Department of the Interior: photo by Ralph L. Williams

Dry weather, high winds, created the famous Dust Bowl in sections of Colorado, Kansas, Oklahoma, Nebraska and Texas in the 1930's.

Photo by Eddie L. Moore





(Above) Farmer quitting dust bowl for greener fields to east passes through Arcadia, Nebraska, in 1934, on his way to Missouri. (Below) Isaak Carter reached Omaha with his family October 29, 1932, en route to Missouri, after losing his Minnesota farm in the depression which had started in 1929. He said, "Can't afford an auto; can't afford railroad fare, so I says to the wife, 'Yore folks and mine came here by covered wagon. I guess we're no better than they were.' "

The Associated Press



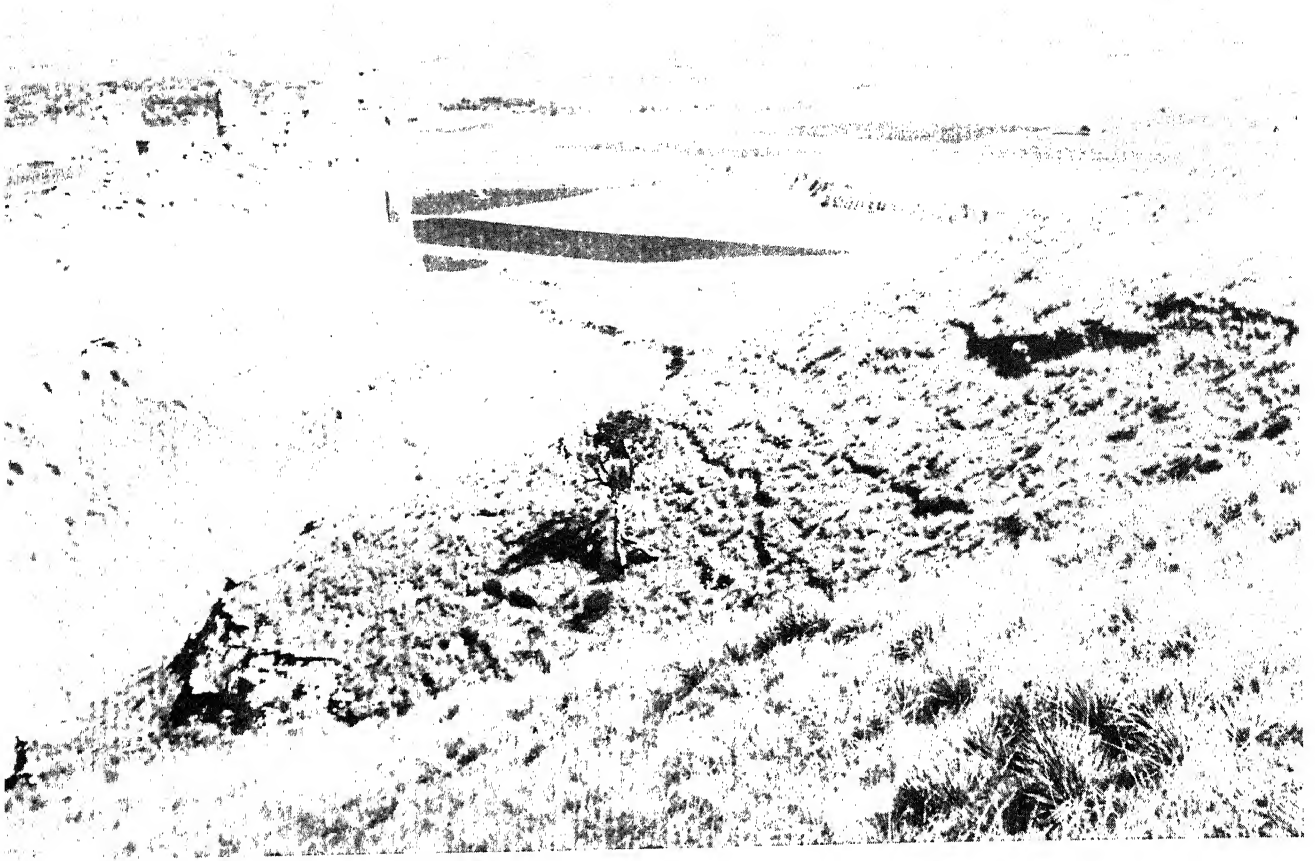


(Above) "Spot sodding," encouraged by U. S. Department of Agriculture, covered many cultivated fields like this one near Ravenna, Nebraska (May 1939), with buffalo grass in Plains area where topsoil had been blowing away. (Below) U. S. Government, supporting farm prices, stores millions of bushels of corn in Granger Country to establish "ever normal granary"; photo made April 1941, Antelope County, Nebraska.





Modern irrigation illustrated near Scottsbluff.
Plastic tubes control flow of water from ditches into fields.



(Above) View from Scott's Bluff today — farms, water reservoirs, towns, instead of limitless grass, buffaloes, Indian tepees and emigrant trains. (Below) This Scottsbluff farmer manipulates flow of irrigation water by hand instead of tubes.

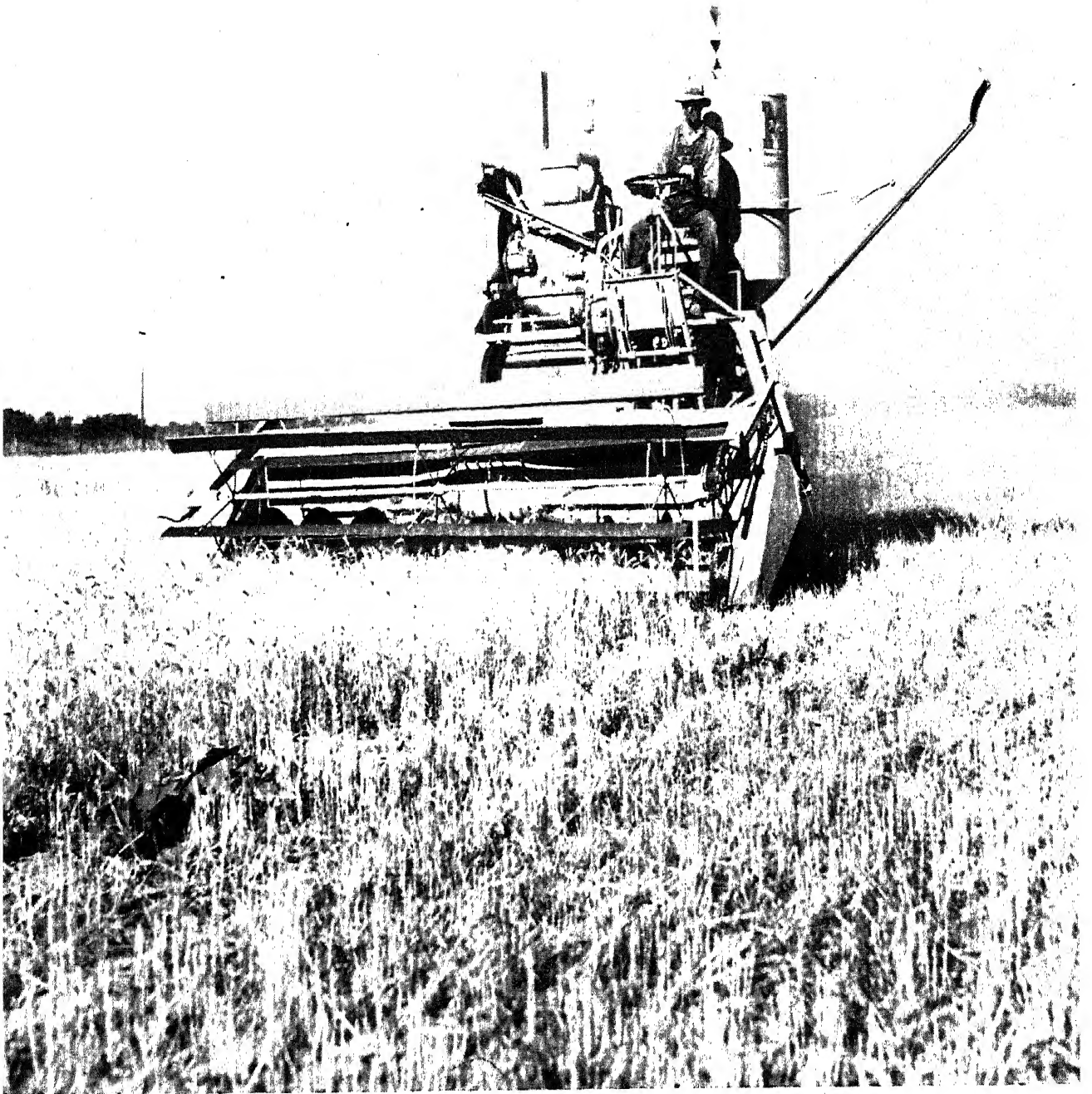




(Left) Official grain tester takes sample of new wheat crop as it pours into Kansas City. (Below) Wheat in gondola cars arriving at Omaha elevators in 1946 for reshipment to feed hungry Europeans.

"Acme"





Huge combine, cutting and threshing wheat in one operation, moves across the plains of eastern Colorado. Wheat is the number-one agricultural crop in the life of the Burlington, which hauled 77,107 carloads in 1947 for a total tonnage of 3,998,060. Corn was second with 3,066,393 tons, flour third with 1,178,662 and sugar beets fourth with 1,051,337. The total agricultural produce, as distinct from animals and animal products, hauled by the Burlington in 1947 came to 13,547,451 tons. Tonnage in livestock, ranging through packing products eggs, milk, cream, butter, cheese, poultry, hides, leather, fish, seafood, and so on, reached 1,693,134 tons. Immense development of industry and mines in the Granger Country, and the region's use of coke, coal, ores, petroleum, building materials, and such, were shown in the fact that the Burlington's 1947 tonnage of 22,783,883, for items produced from below the surface of the earth, eclipsed the total of grains and livestock. As the twentieth century neared its halfway mark the line between farming and industry in the Granger Country had all but disappeared.



Roping and branding calves on the Brown Ranch near Sheridan, Wyoming. Days are long dead when cowboys driving herd up from the Southwest to the green pastures of the mountains sang, "Git along little dogies, for you know that Wyoming will be your new home." Wyoming raises its own cattle today, high-bred fat steers in place of the longhorns that once came over the trail, and the state, as the place where the Plains end and the Mountains begin, is a famous pasturage.





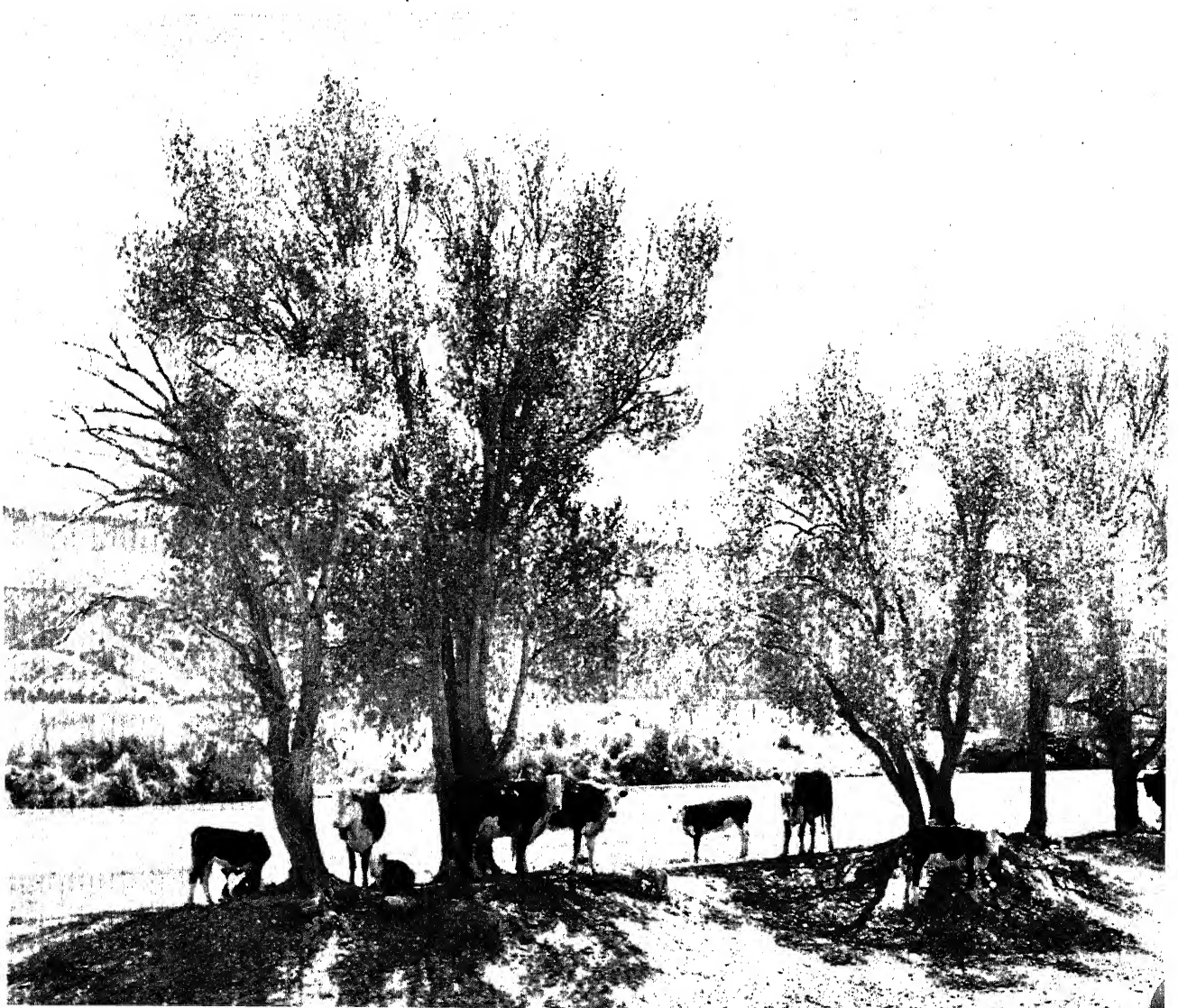
Peace, prosperity, the slow drumming of heavy steers across the grass of Wyoming, have replaced the Wild West and days when cowboys sang:

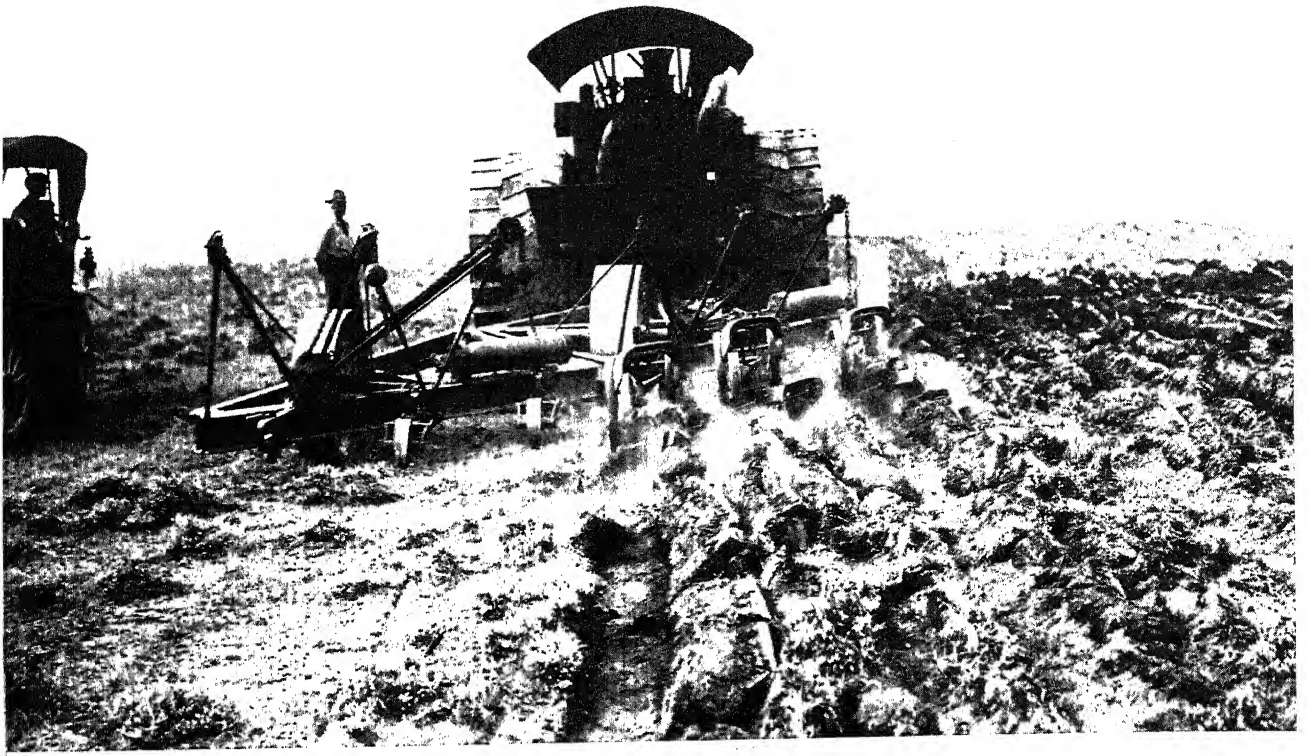
Don't go, I pray, stay away if you can,
Stay away from that city, they call it Cheyenne,
For old Sitting Bull or Comanche Bills
They will take off your scalp on the dreary Black Hills.



(Above) Horse and tractor join in stacking hay for Wyoming steers to eat in winter.

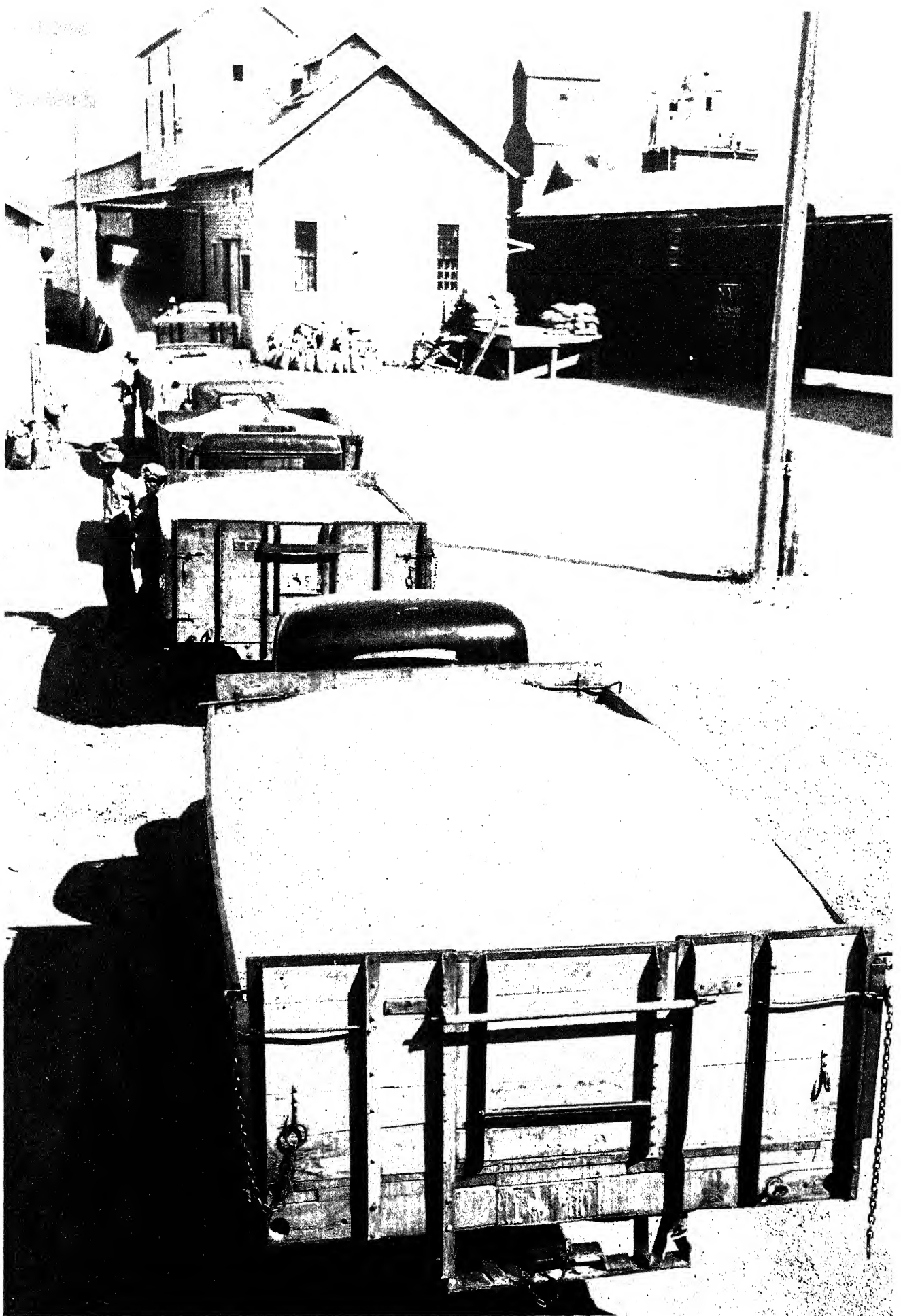
(Below) At this spot the Oregon Trail crossed the North Platte. It is not the river it was in 1849, and the Hereford is not a buffalo, but the lives of human inhabitants along its banks know more of comfort.



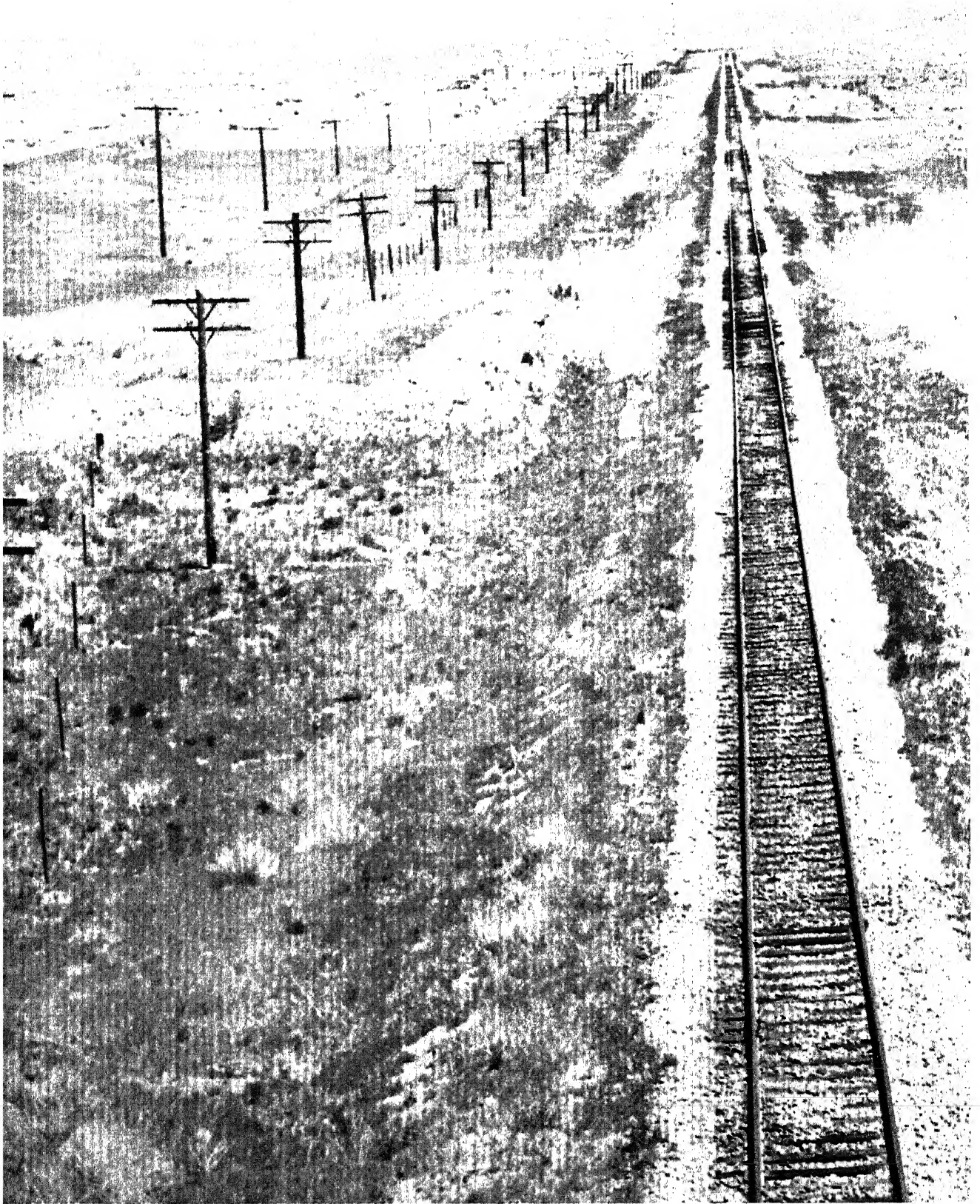


(Above) Steam plow of type popular in 1920 turns six furrows on the upland fields of Wyoming. (Below) Trucker unloads his truck of wheat at elevator, Hardin, Montana.





Trucks delivering Great Northern White beans to Burlington cars at Powell, Wyoming.



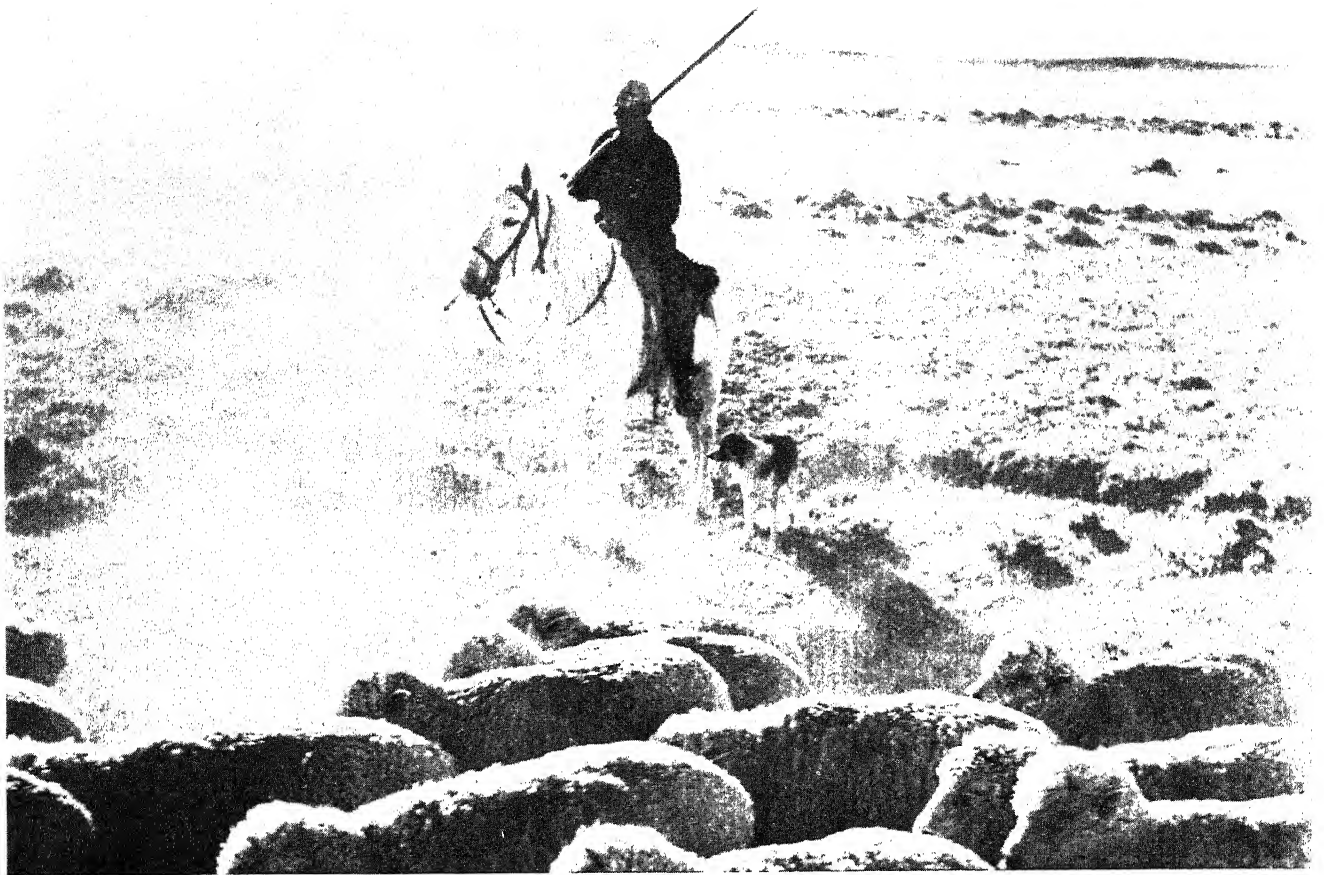
Burlington single track near Billings, Montana.



Lambs and shepherd near Hardin, Montana.



One day old and gravely contemplating the distant Black Hills.



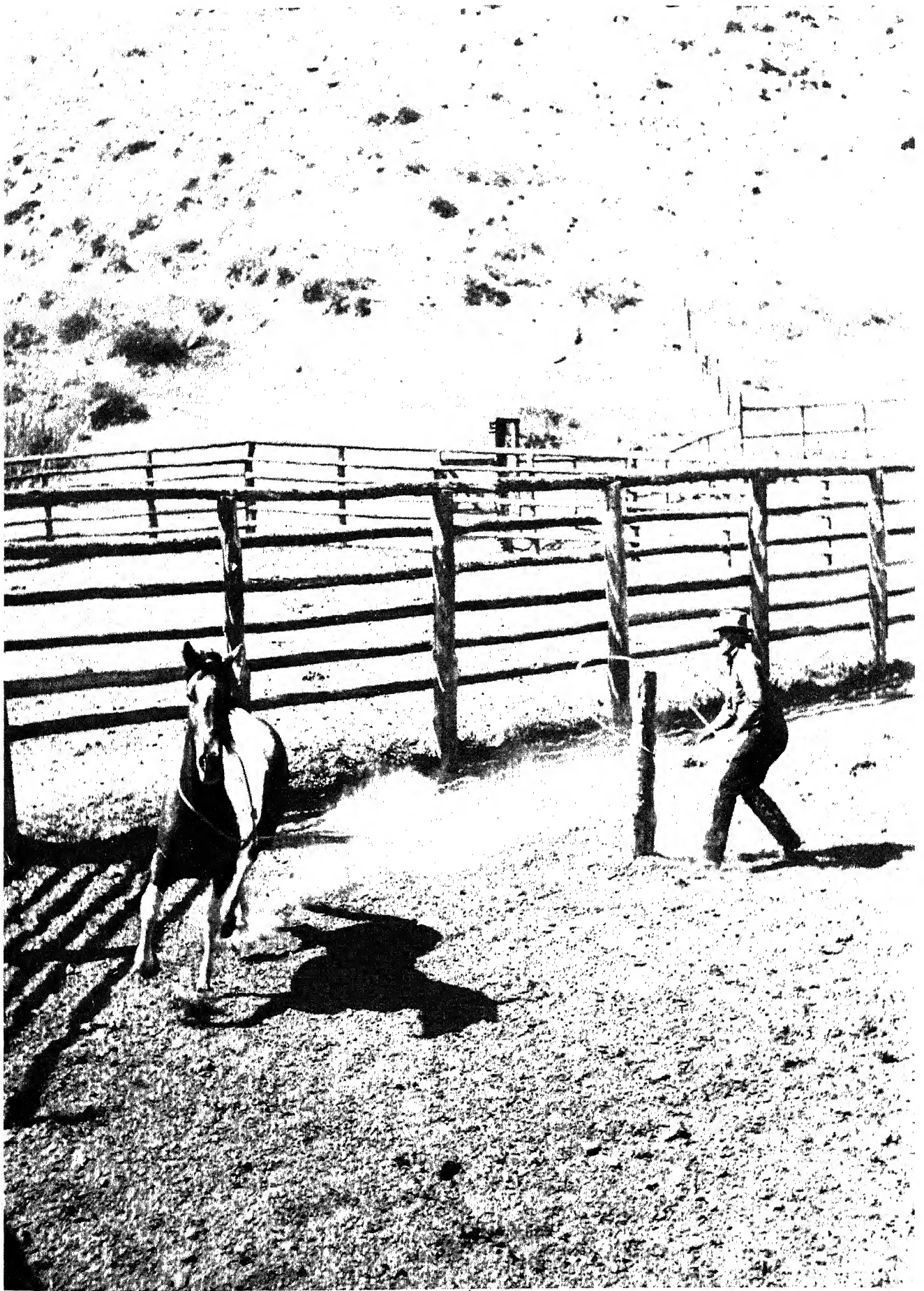
(Above) Shepherd with ancient symbol of his trade, the crook, on Wyoming range.
(Below) Ewe's eye rolls belligerently as photographer approaches her newborn twins.





Burlington engineers surveying for the North Platte branch, which parallels the old Mormon trail, came on the grave of Rebecca Winters, marked by her name on a wagon tire, with date 1852. They felt it must be that of a Mormon mother and wired Salt Lake. Next morning a son of Rebecca Winters, brother-in-law of Heber J. Grant, president of the Mormon Church, got the telegram. The engineers turned the road out enough to pass the grave, which (*above*) stands by the right of way today. (*Below*) Rural free delivery mailbox near Pathfinder Reservoir, Wyoming.





Breaking a wild horse at "snubbing post,"
Eaton Dude Ranch, Wyoming.



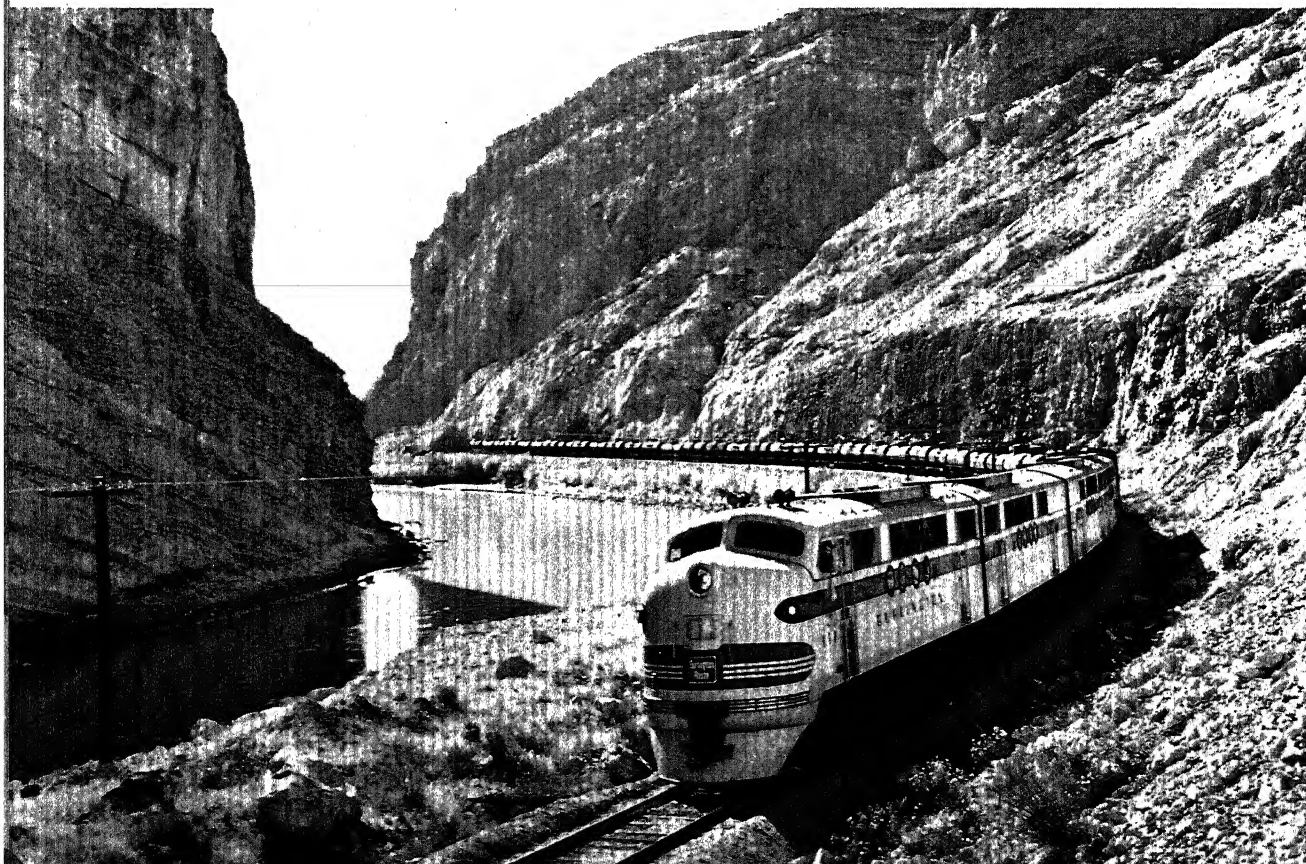
After many generations, a convert at last to the Iron Horse.
Crow Indian from tribal agency, Montana.



Indian madonna waits in station at Sheridan, Wyoming, with papoose, who probably is not dreaming of the battlefield a few miles up the track where his people had their final spasm of glory that day in 1876 when they wiped out General Custer.

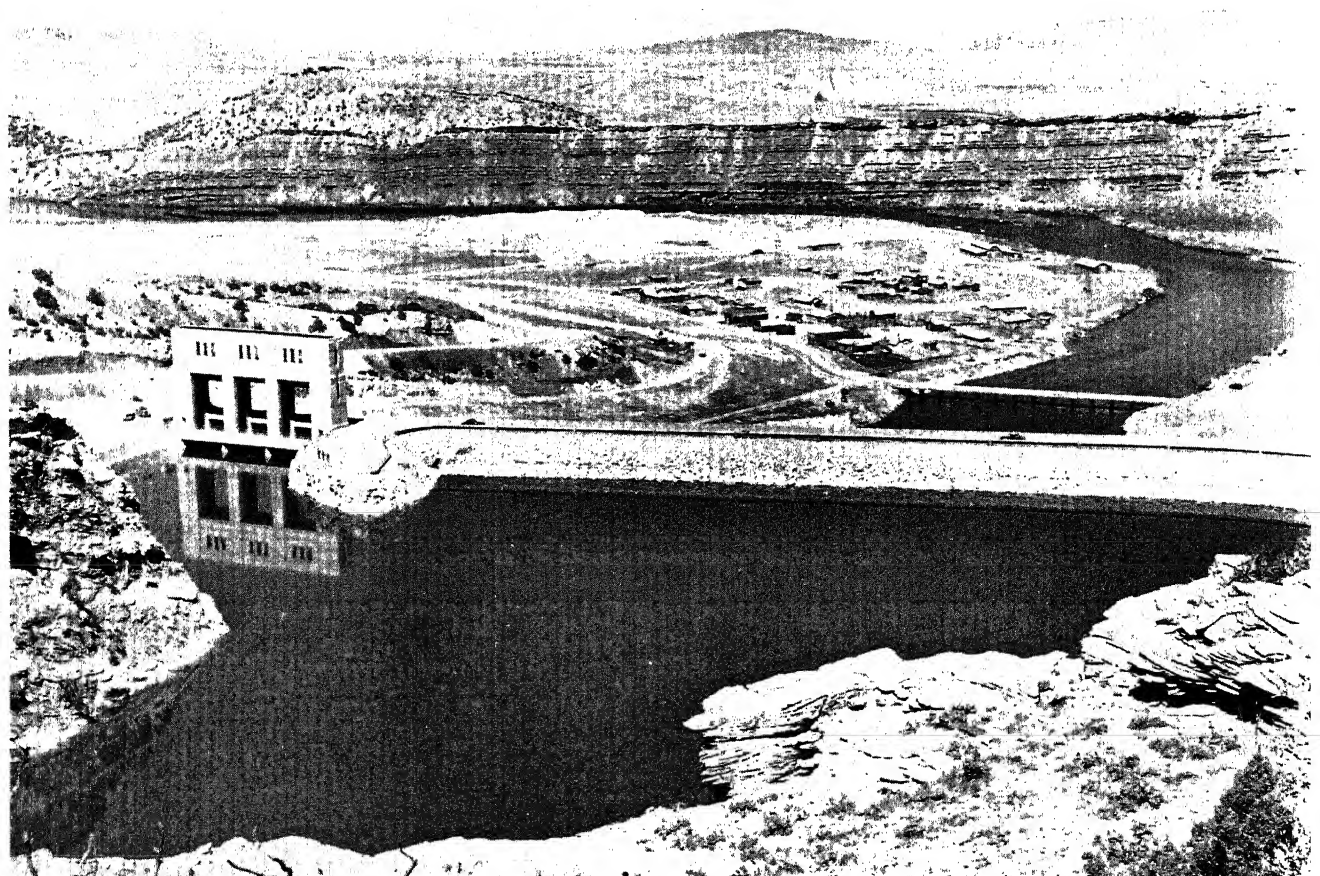


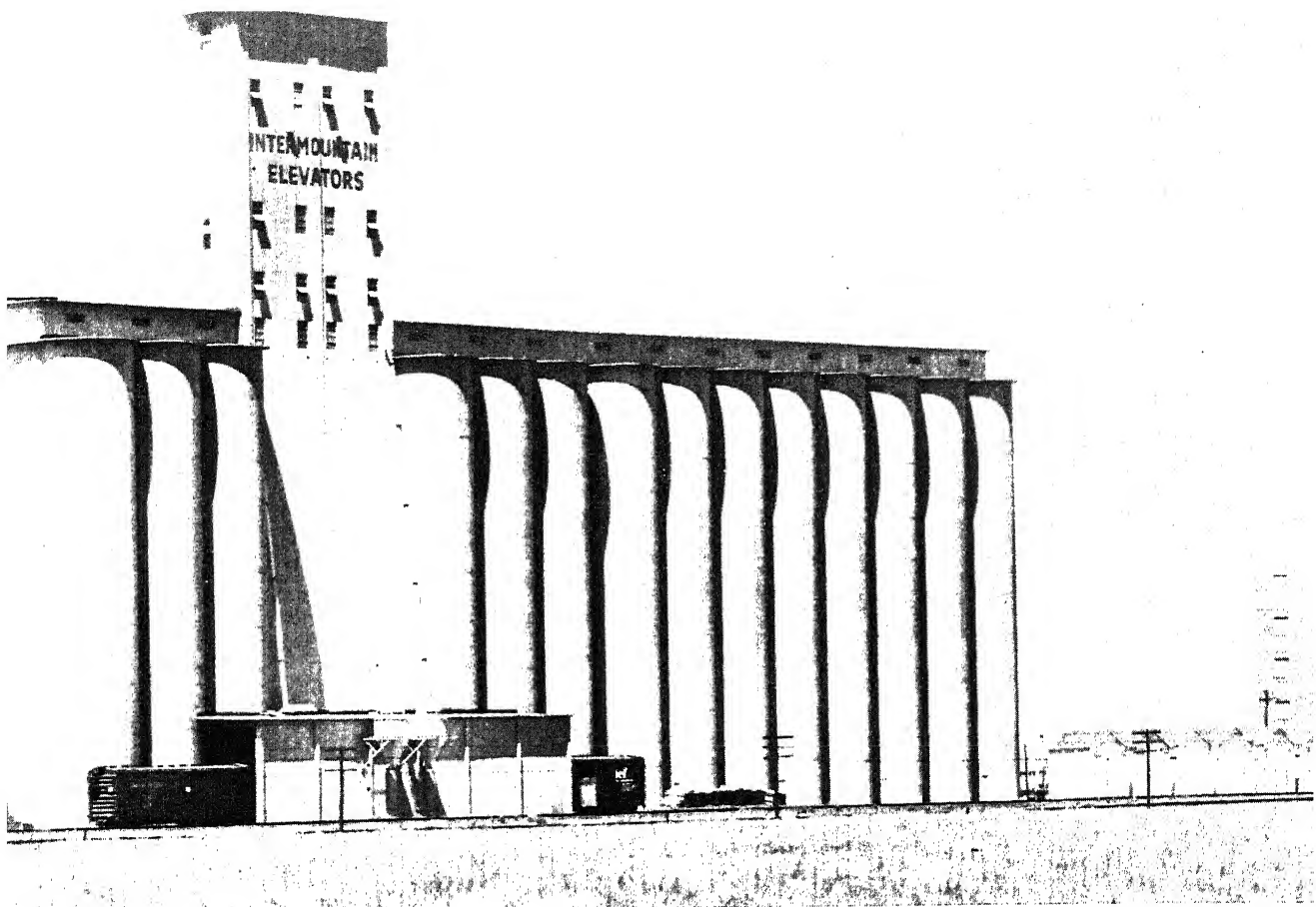
(Above) Stockman's bar, Sheridan, Wyoming.
(Below) A wartime oil train in Big Horn Canyon, Wyoming.





(Above) Loading beet sugar from stockpile at Hardin, Montana, warehouse onto conveyors which carry it to Burlington boxcars. (Below) Dams such as this in North Platte River at Alcova, Wyoming, have turned deserts into sugar beet production.





(Above) The Great Plains, running westward up to the wall of the Rockies, send wheat to Denver, Colorado — also vacationists. (Below) Modern public school, Hardin, Montana.





Village life on the eastern plains of Colorado is indistinguishable from that of western Kansas and Nebraska and southeastern Wyoming.

Postmistress at Deaver, Wyoming, meets the mail train with mail truck of extremely practical size.





(Above) Denver, population 400,000, magnet of cowmen, miners, adventurers across a hundred years, is still a magnetic city for all its modernity. (Below) At twilight the Rockies soften like hills in an old Millet landscape, as they roll away from the promenade of the swank Broadmoor Hotel at Colorado Springs, Colorado.





(Left) Colorado has for generations drawn a constant stream of farmfolk from the hotter plains of Iowa, Nebraska, Kansas, and the Dakotas. Colorado climate, while colder in winter than California's, is not distressing thanks to dryness of the air. (Below) High School track meet at University of Colorado.

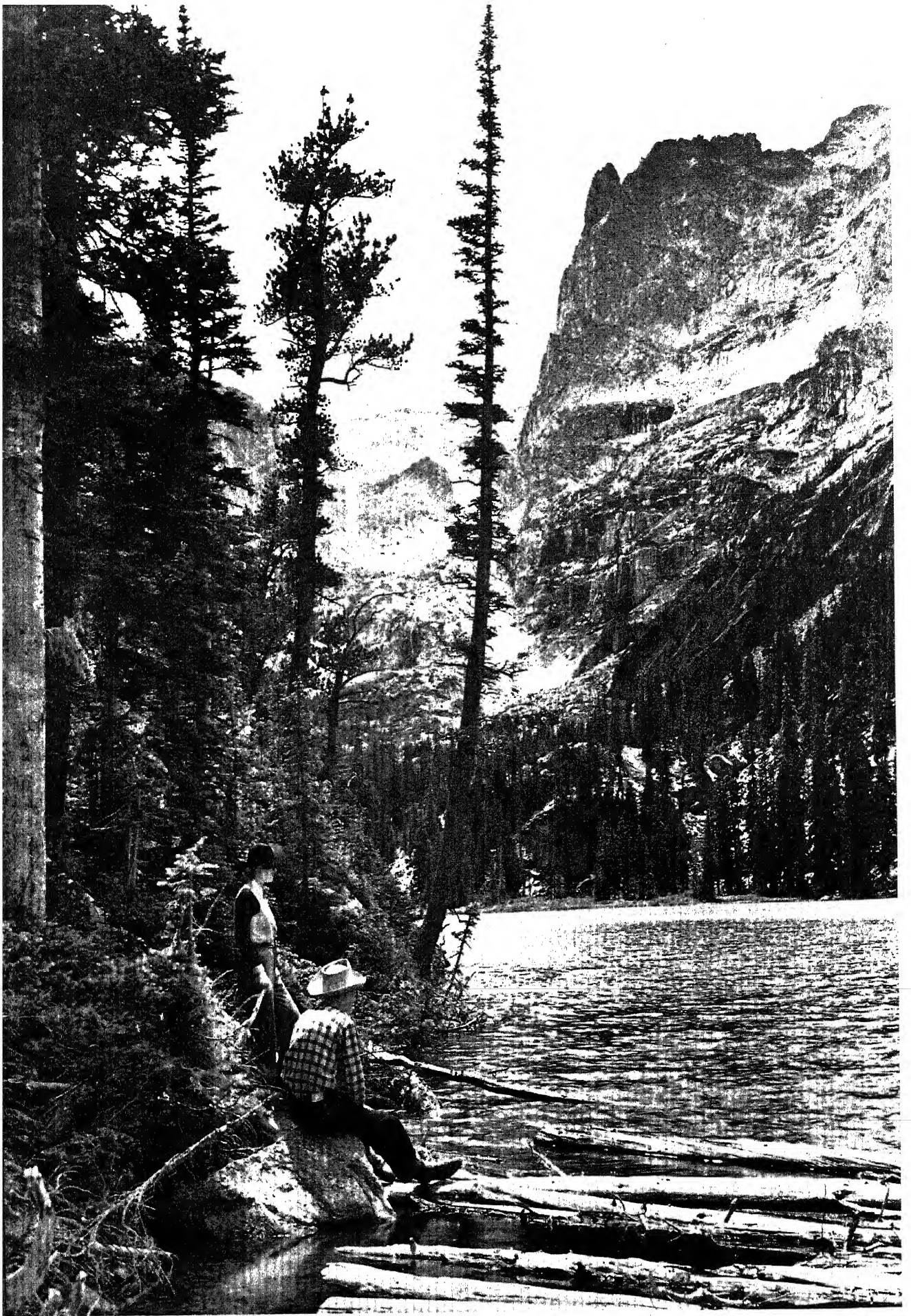




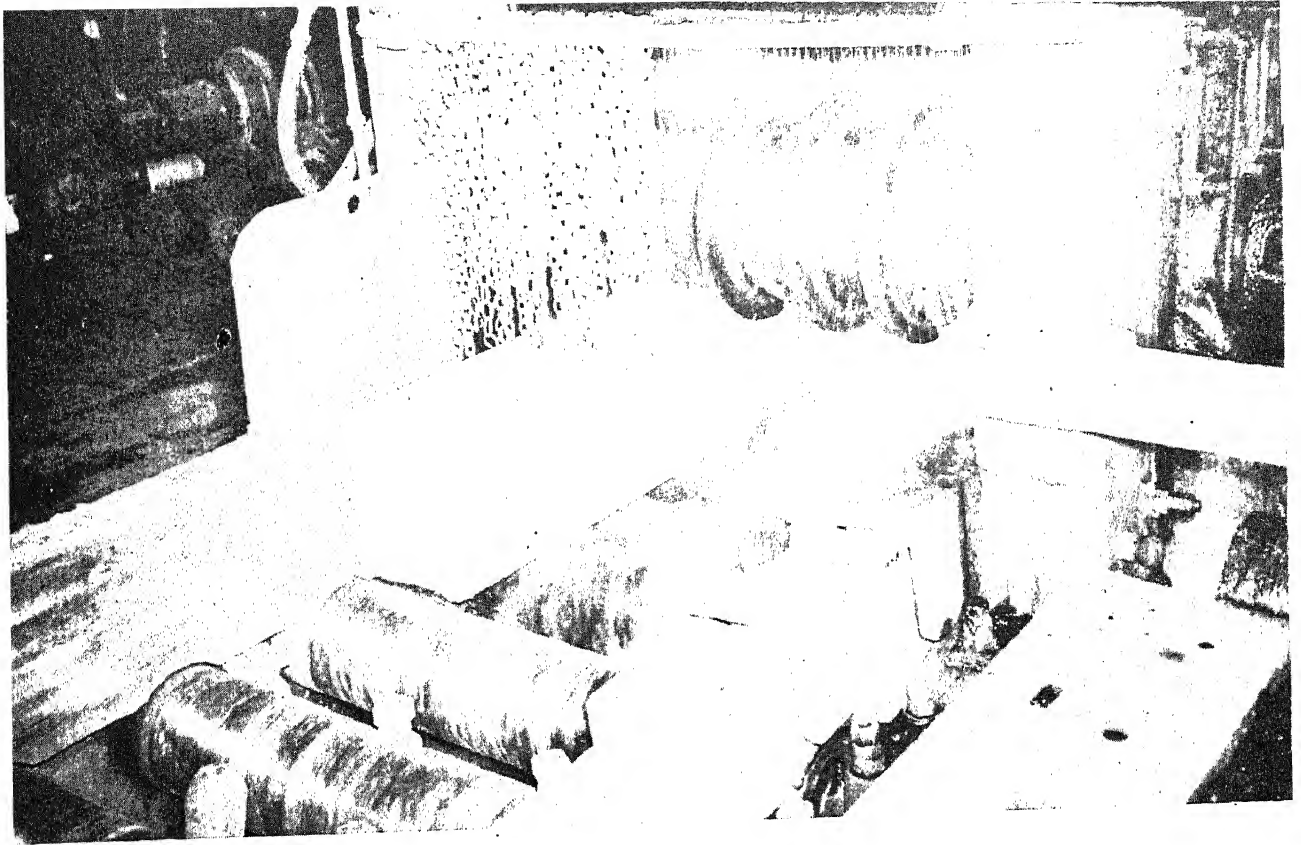
Mountain scenery has made dude ranching a major industry in the West. Rocky Mountain National Park (*above*), with professional "dude wrangler" escorting party of girl tourists.



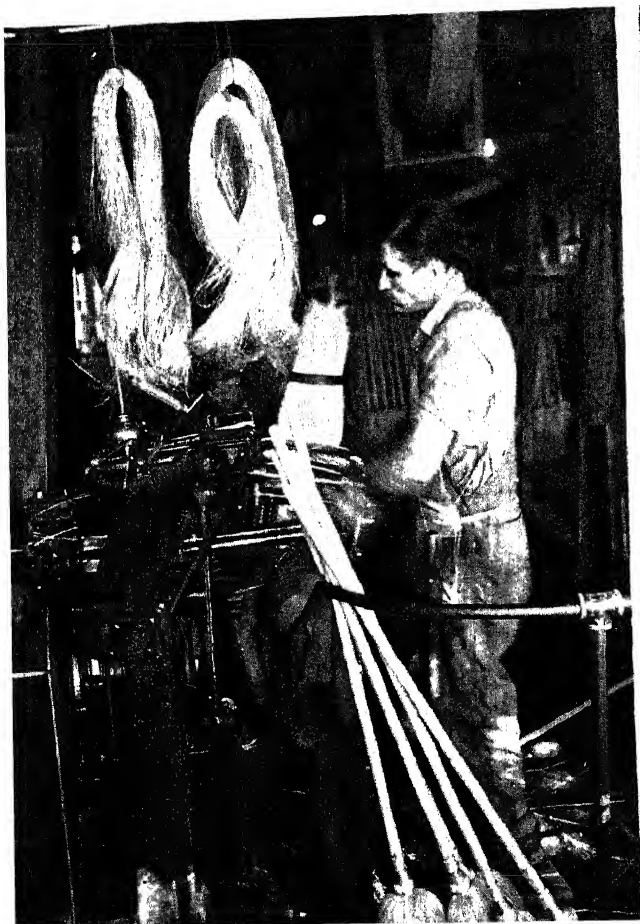
No visitors appreciate towering and tumbled magnificence of the Rockies as do those who come from the flat prairies and the plains of the Mississippi and Missouri River valleys.



One of the cold blue lakes which are fed by the eternal snows of the Rockies.



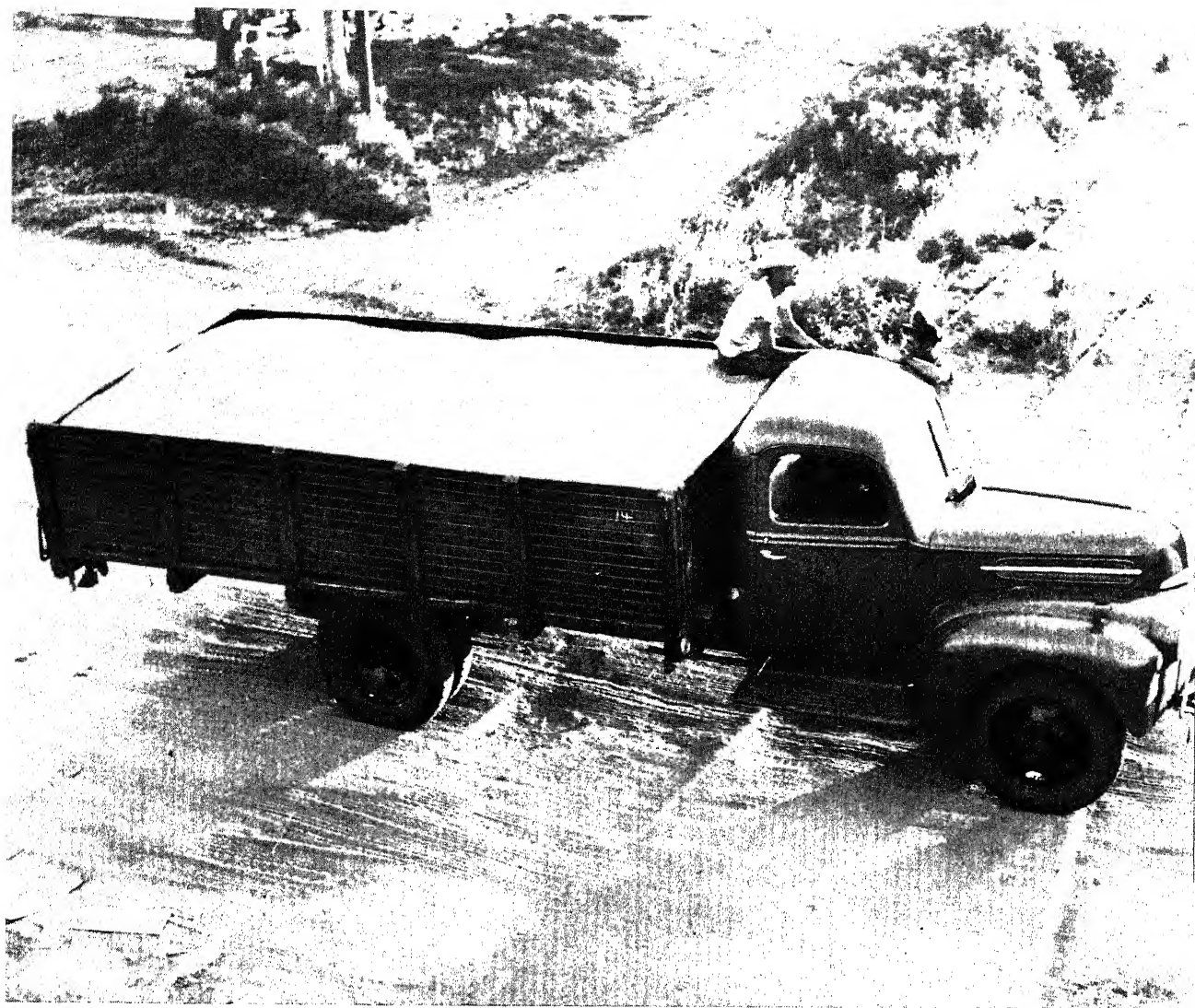
Pueblo, 118 miles south of Denver, population 80,000, second city of Colorado, industrial in character, famous for brooms (*below at left*) and railroad rails (*above and below at right*).





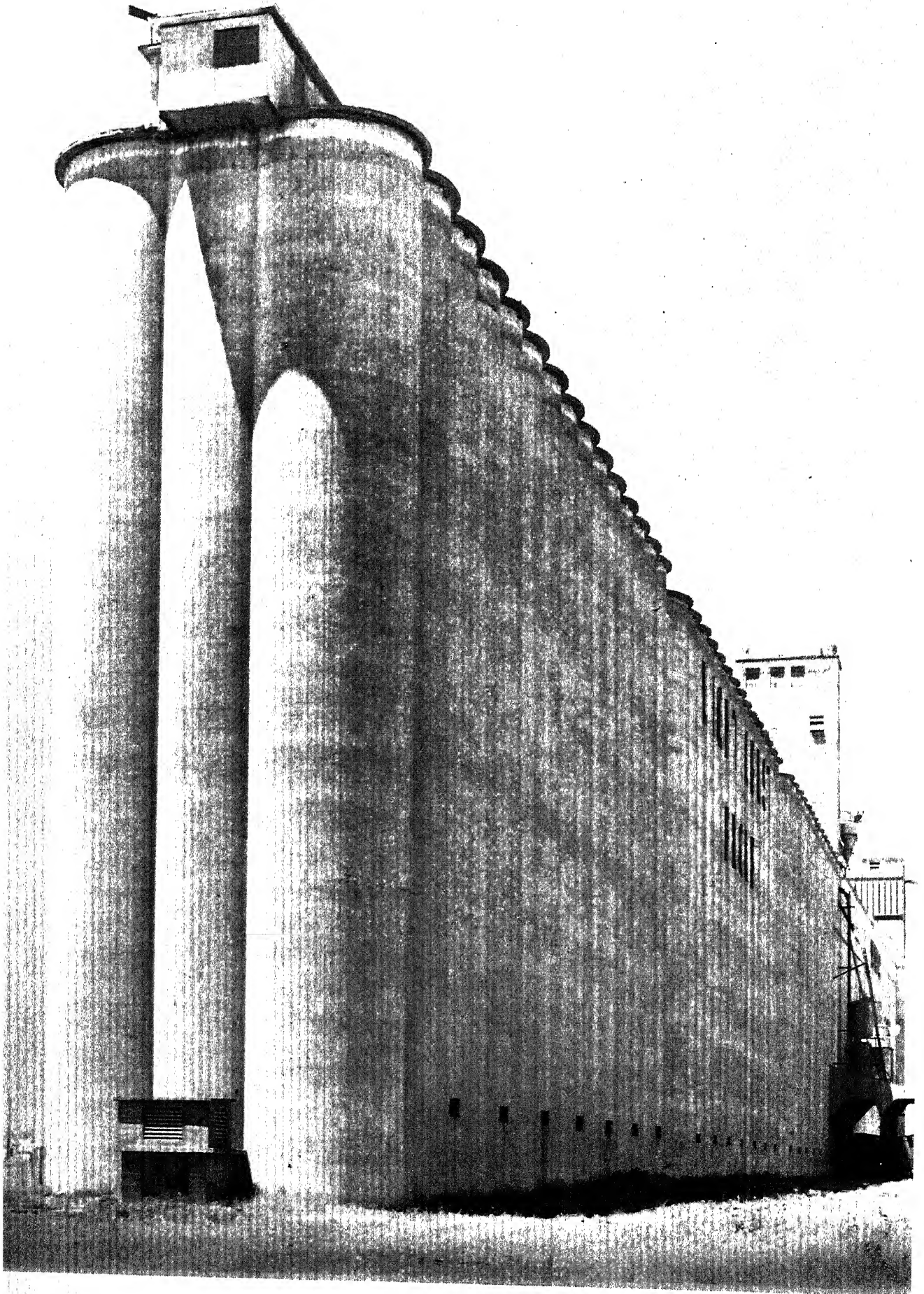
As Burlington's line to Texas, the Colorado and Southern and the Fort Worth and Denver City, runs through the famous Panhandle, hay balers are seen outside Vernon. Occasionally horse-drawn wagons still appear at wheat threshings where hands group around chuck wagon at noon.





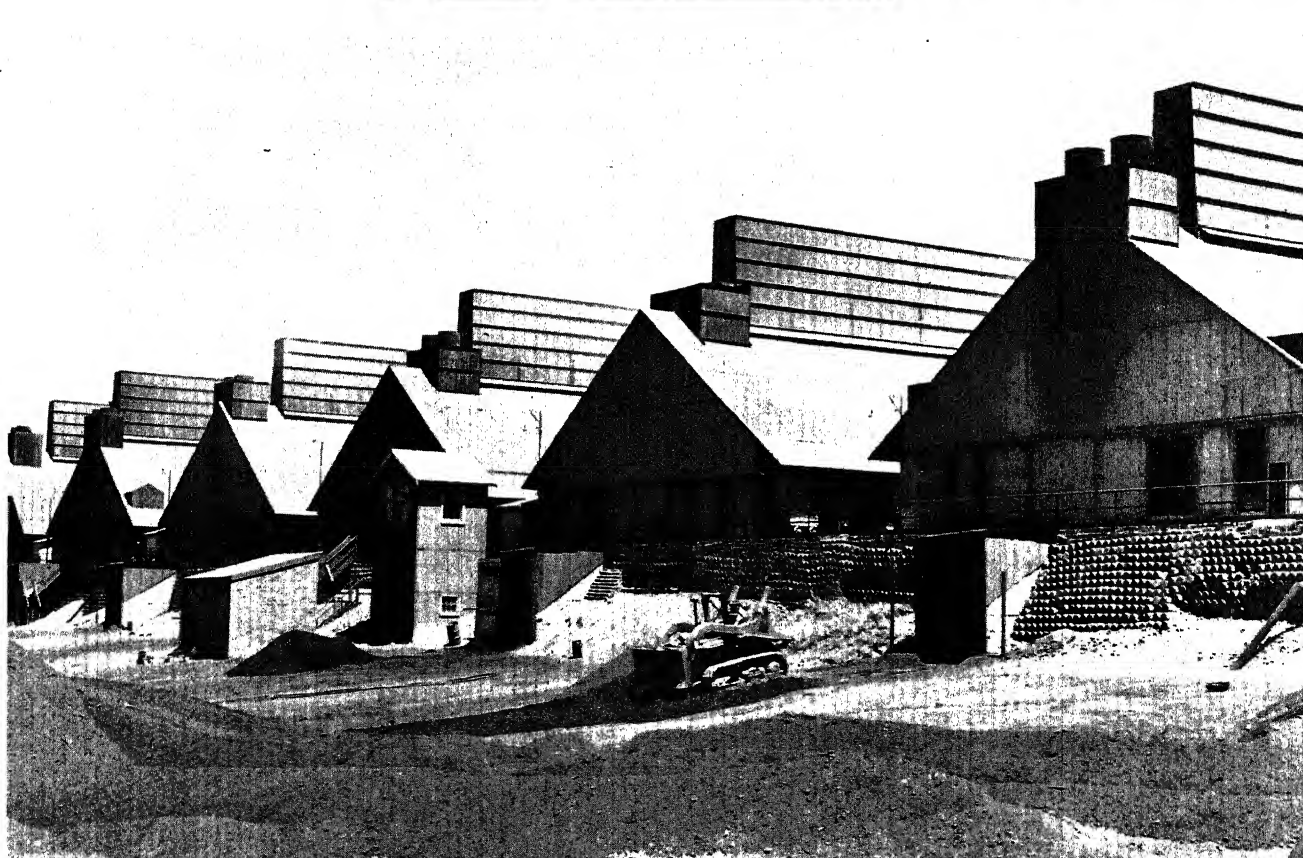
Gasoline-driven elevators transfer wheat from trucks to boxcars on Burlington at many sidings in Panhandle of Texas.

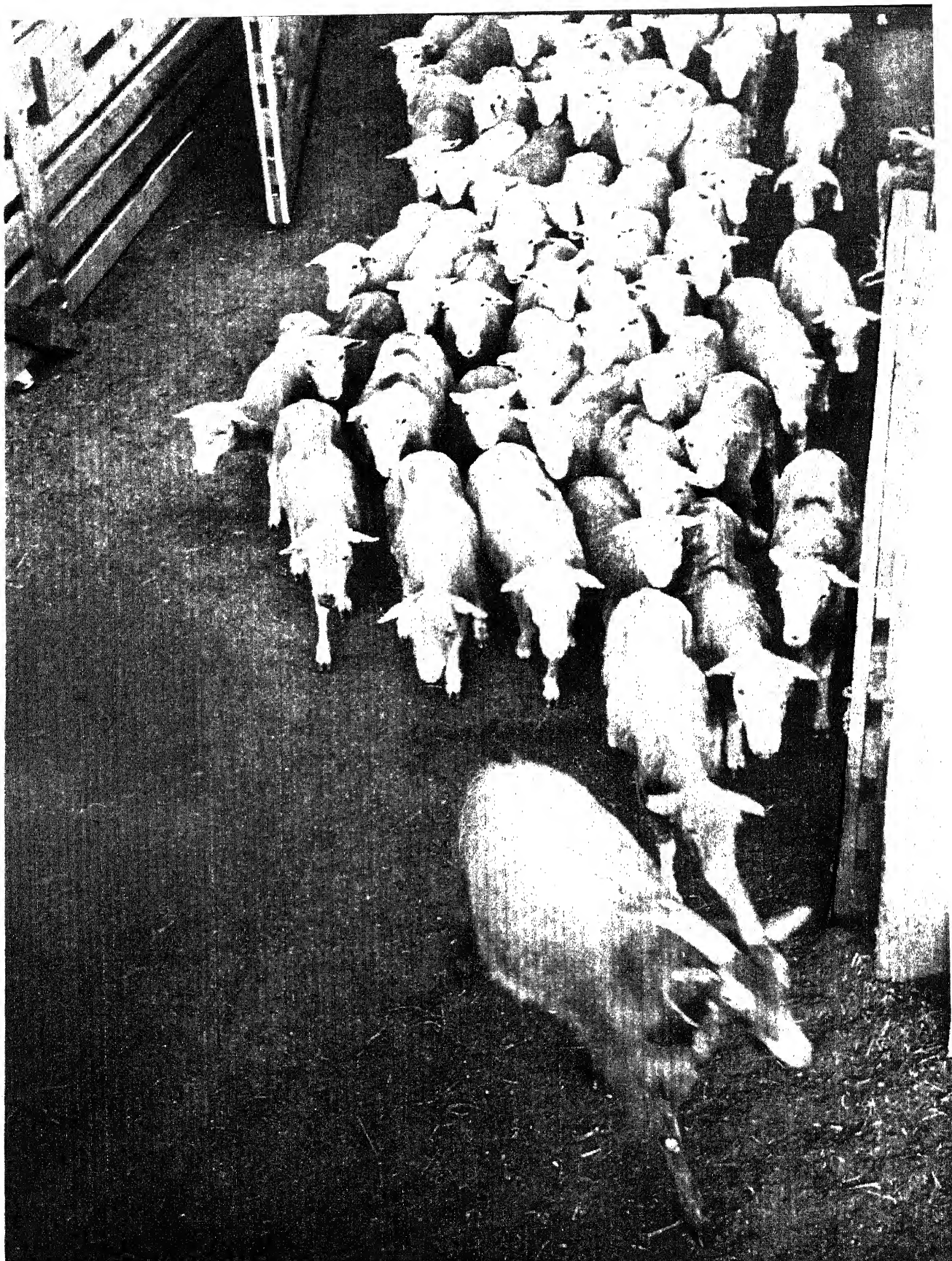




Grain elevator at Amarillo has something of the scope of the State of Texas itself.

(Right) Thurman Frost, buyer for food store chain, inspects the lettuce crop near Lubbock, Panhandle city of 60,000 where vegetables, cotton, beef, poultry, hogs are handled in quantity. City holds 2008-acre Texas Technological College grounds, famous for teaching technology and textile engineering. (Below) Zinc plant, Amarillo, Texas. Bulldozer in foreground pushes ashes into piles to be shipped away to factories which recover gold and silver. Amarillo, population 80,000, was center for oil boom in late 1920's.

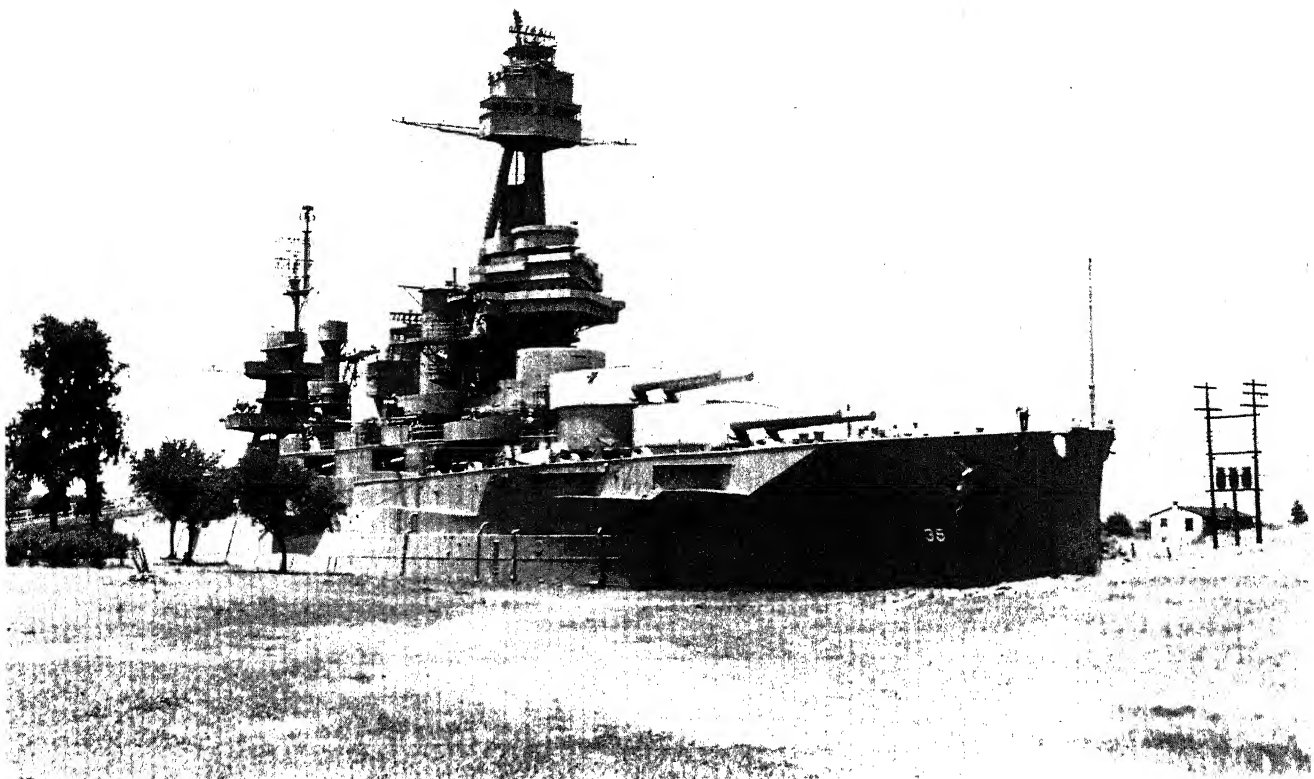




"Judas" in Fort Worth. As in all Midland or Far Western stockyards, incoming sheep are led about the premises by a trained and cynical resident goat. Sheep, ever ready to follow a leader, set great store by the example of goats, who are by nature far more self-confident, even to the point of battling coyotes when put with timid sheep on the open range.



(Above) Boot shop in Livestock Exchange, Fort Worth. (Below) Old U. S. Battleship *Texas* sleeps in the sun outside Houston near San Jacinto Memorial, site of battle which won Texan independence from Mexico in 1836.

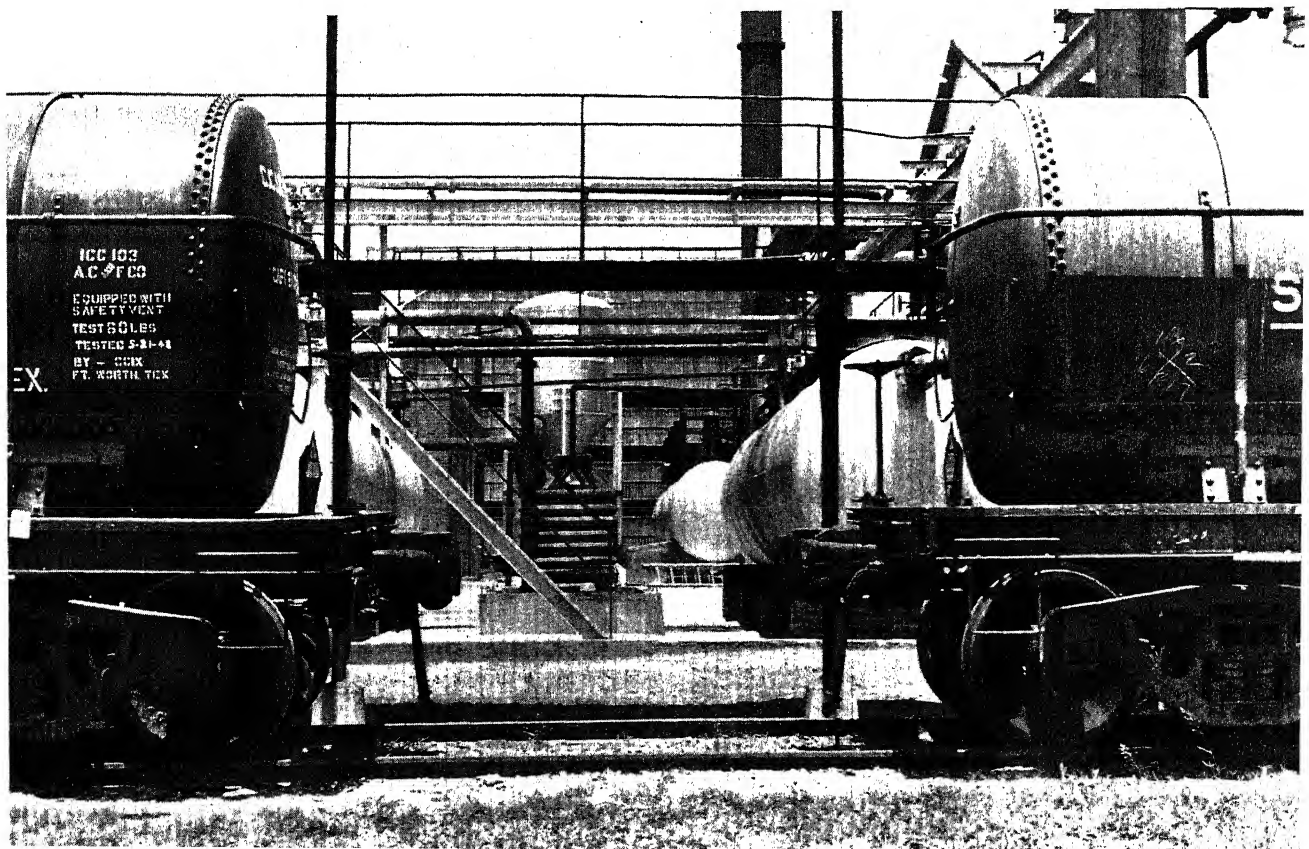


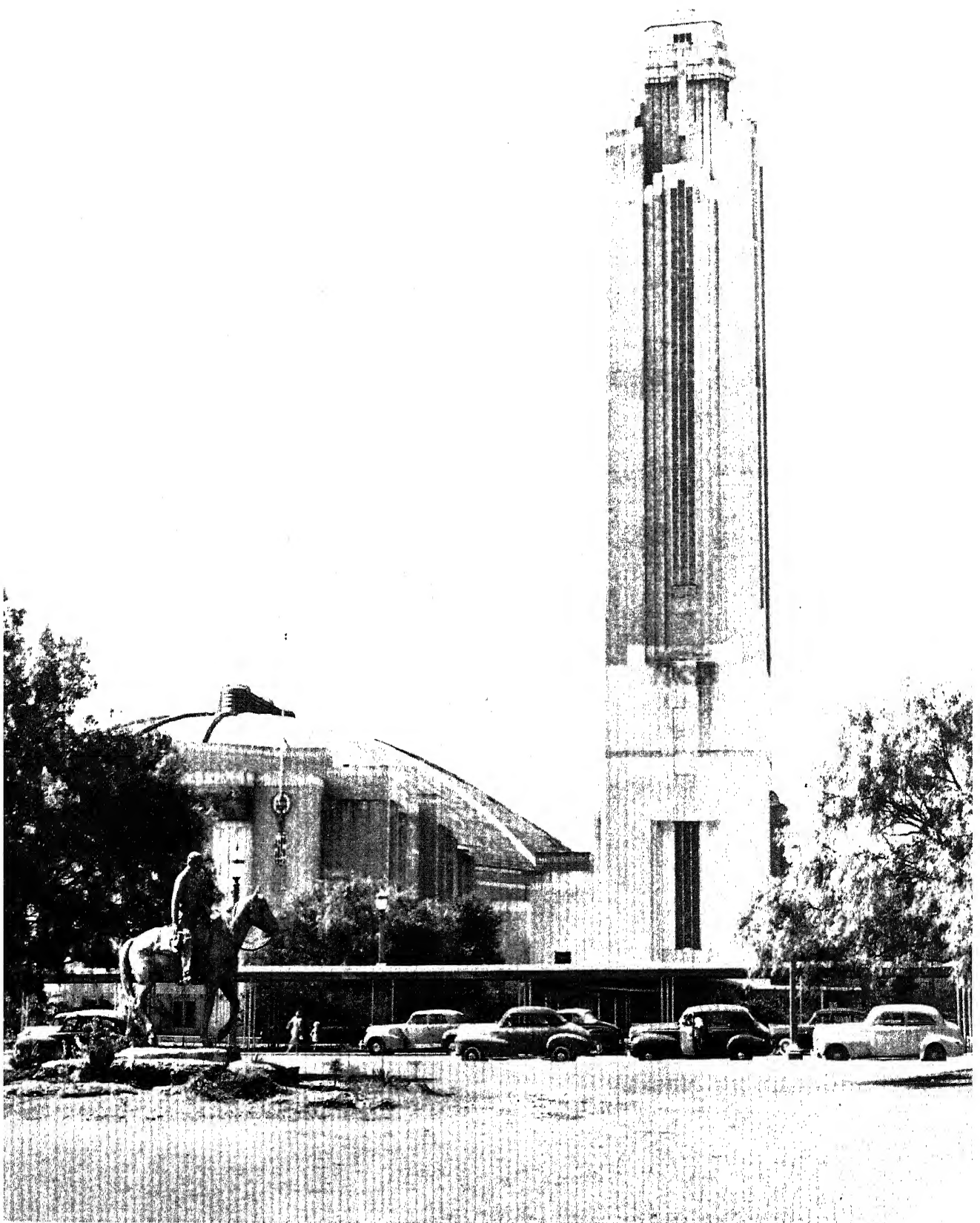


Cattlemen at Fort Worth Livestock Exchange, heart of the 253-acre stockyard which is, in its turn, the heart of the livestock industry of the Southwest. Fort Worth, approaching 300,000 in population, stands between the Grand Prairie which runs to the east with fruit and truck gardens, and the North Central Plains which roll westward amid treeless grain fields and stock pastures. Burning gas, Fort Worth is practically free from smoke, and has a sunlit breeziness in its sky as well as its people.

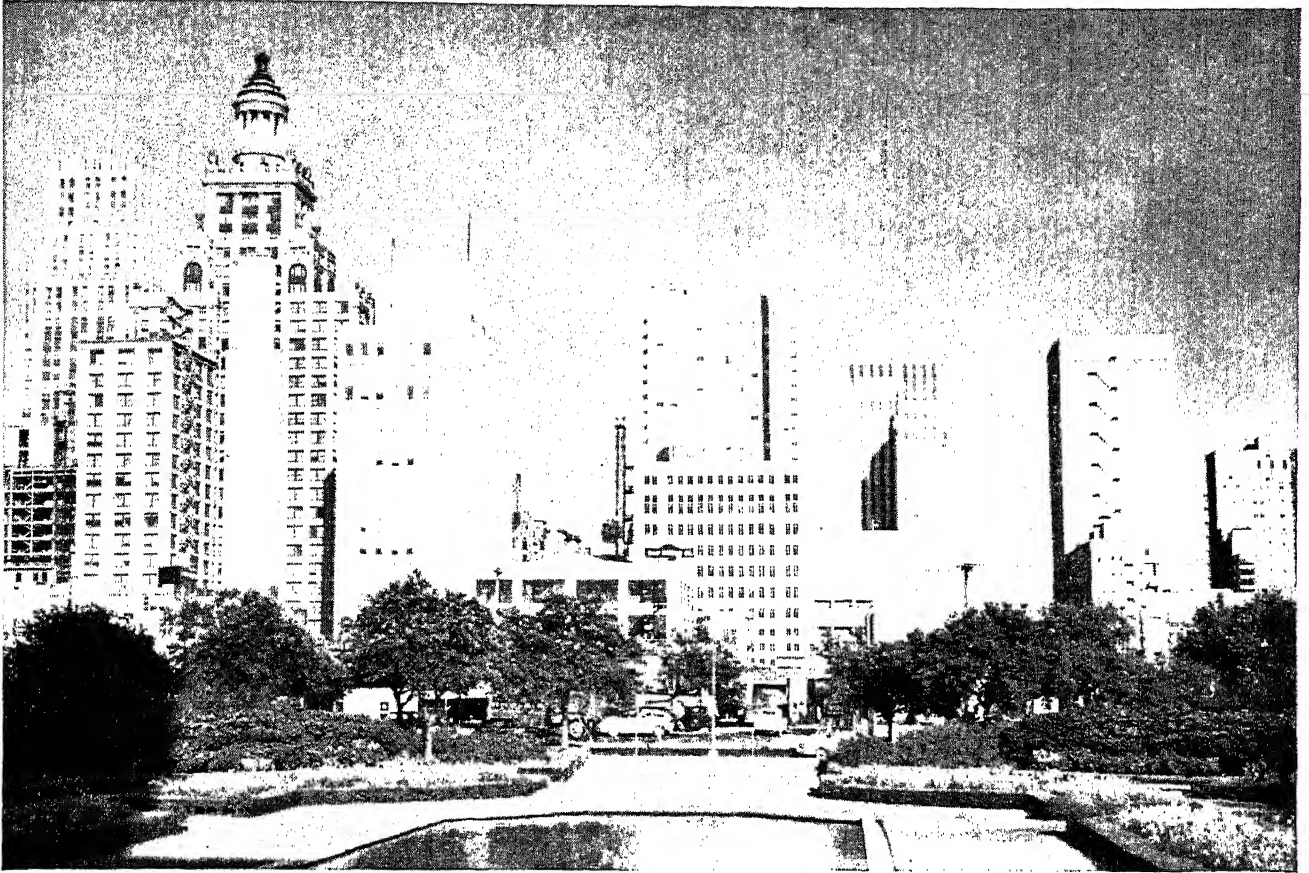


(Above) Street in Dallas, the metropolis of northern Texas, whose 500,000 people handle the huge industrial and commercial volume of the region. (Below) Tank cars lace Texas, carrying out oil and chemicals.





Memorial at Fort Worth to Will Rogers, the Oklahoma-born cowboy, humorist, rope artist, movie actor, newspaper columnist, stage monologist, part Indian, who quit school in 1898 at the age of nineteen to punch cows in the Texas Panhandle. Best-paid entertainer of his time, averaging perhaps \$600,000 per annum in the late 1920's and most of the 30's, he typified to the American public the salty wisdom, horse sense and sharp humor of the traditional uneducated pioneer. He was killed in an airplane accident in 1935, aged fifty-six.

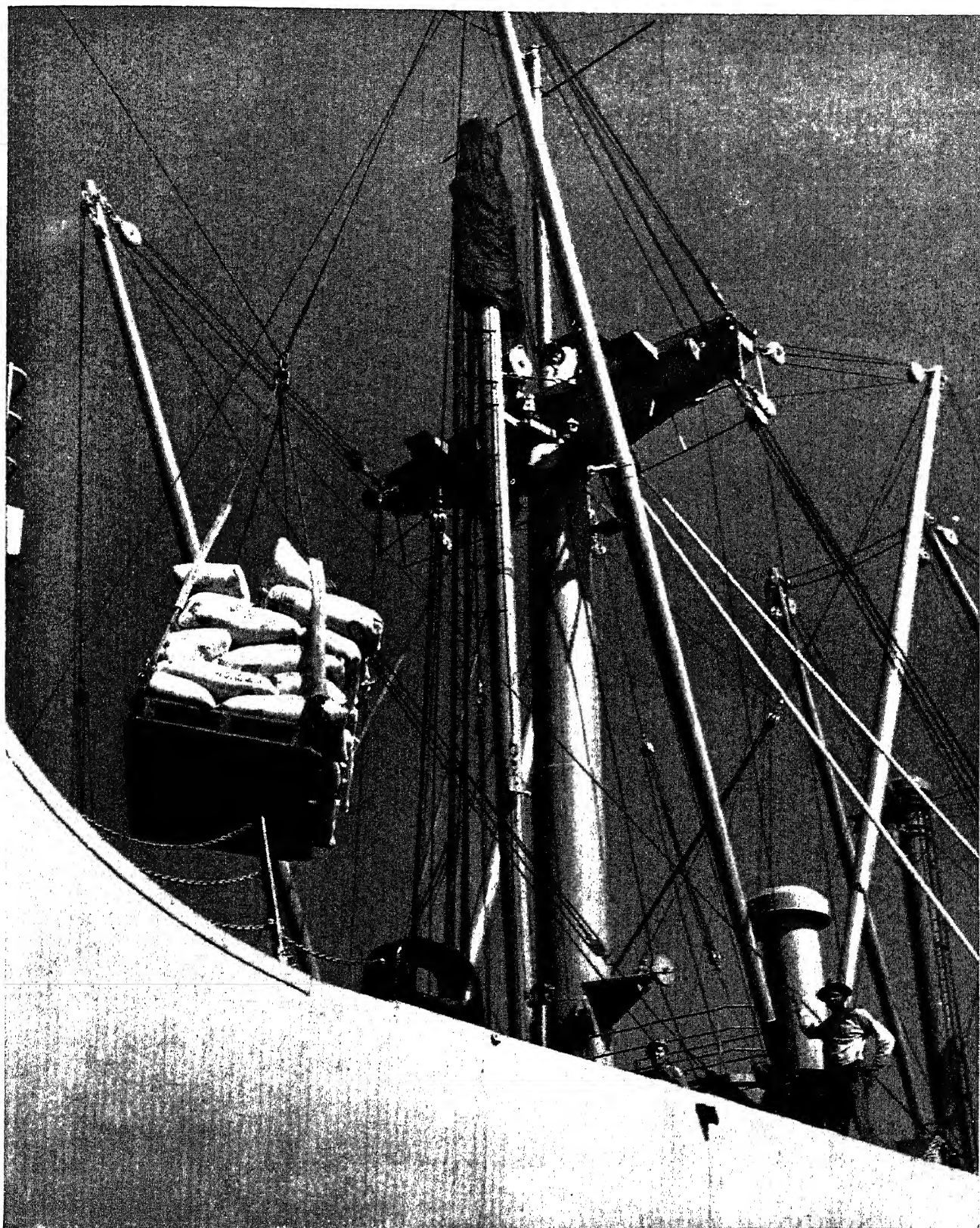


(Above) Downtown Houston, largest city in Texas, 500,000 population, center for offices of oil companies, heart of oil industry and world-famous cotton market, port for freighters up from the Gulf and freight cars in from east, north and west. (Below) One of the dressmaking factories for which Dallas is famous in the trade.



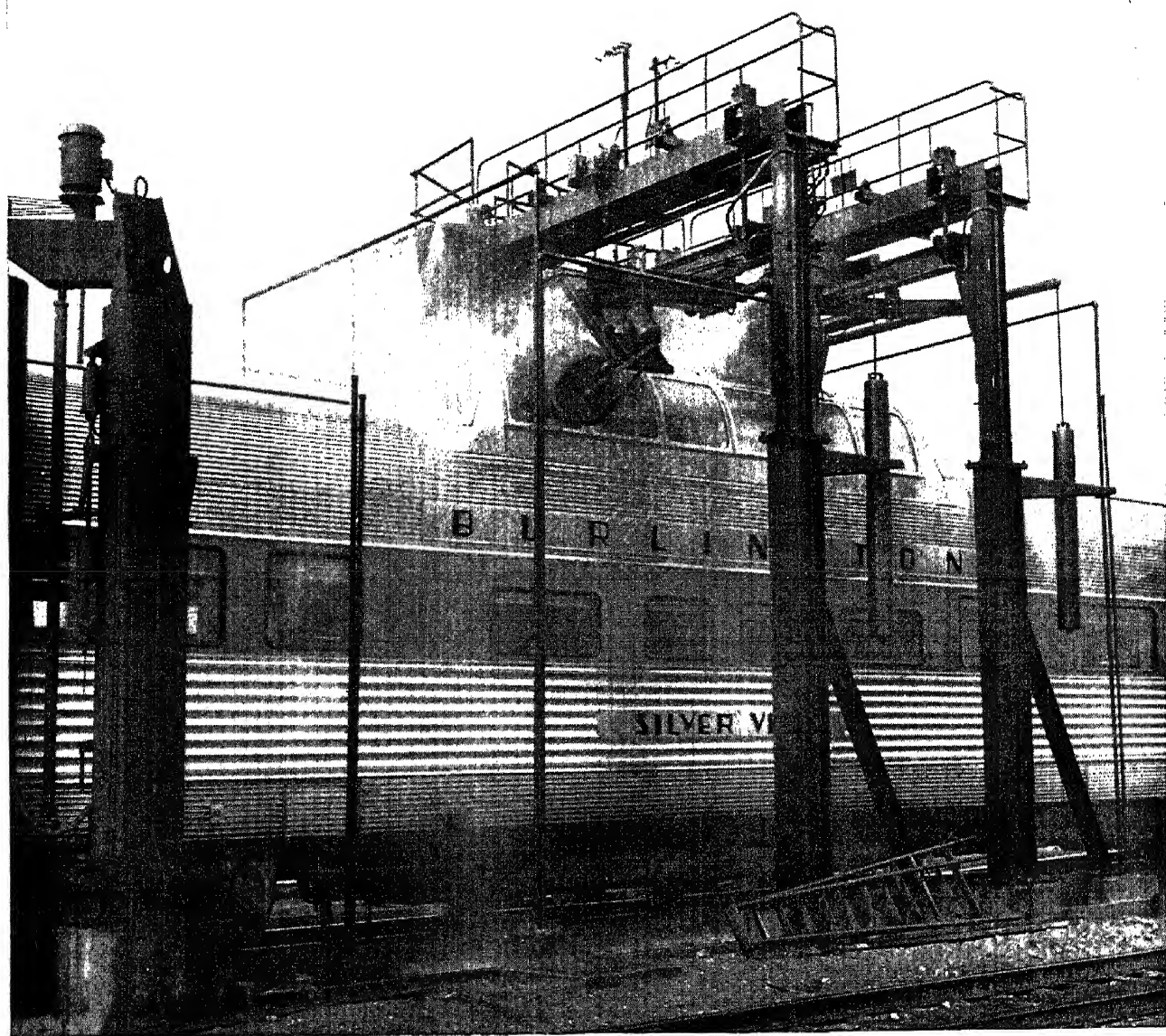


Galveston, called "the Oleander City" because of its tropical flowers; city of over 80,000, seaport and playground for tourists.

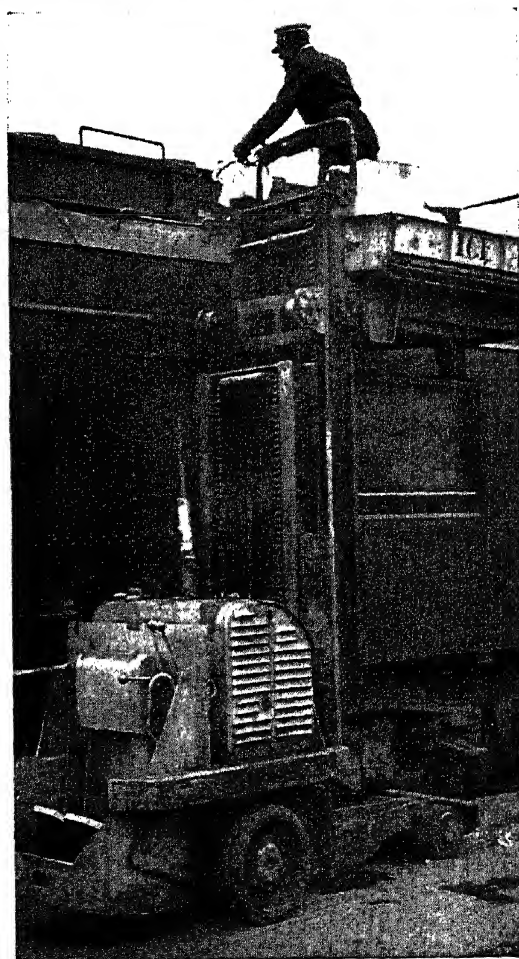
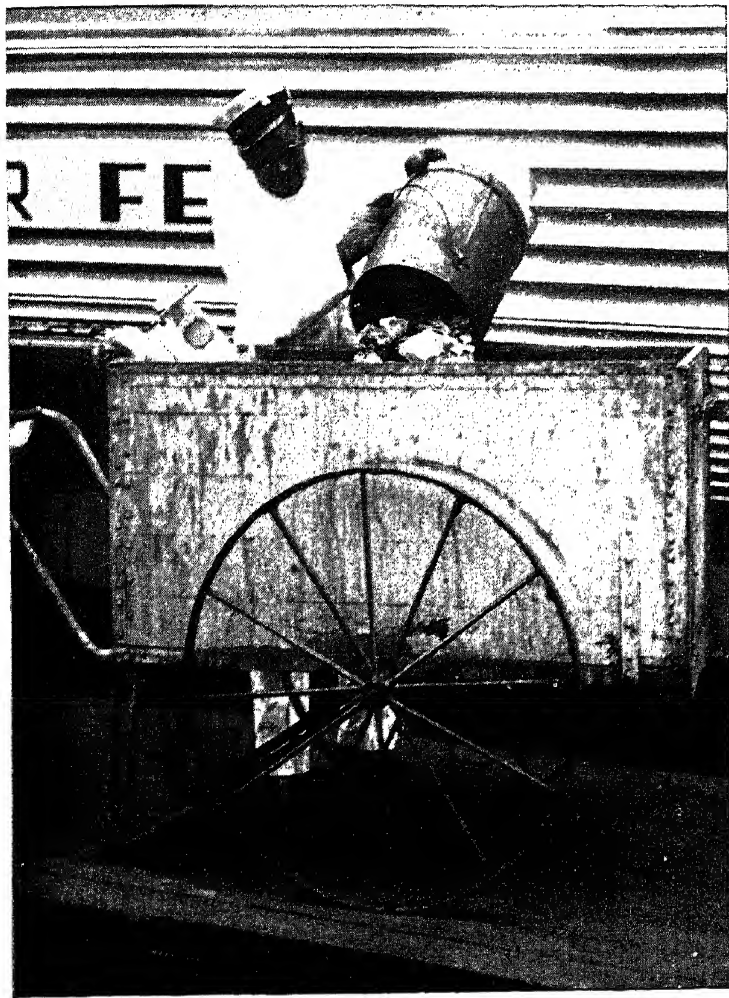


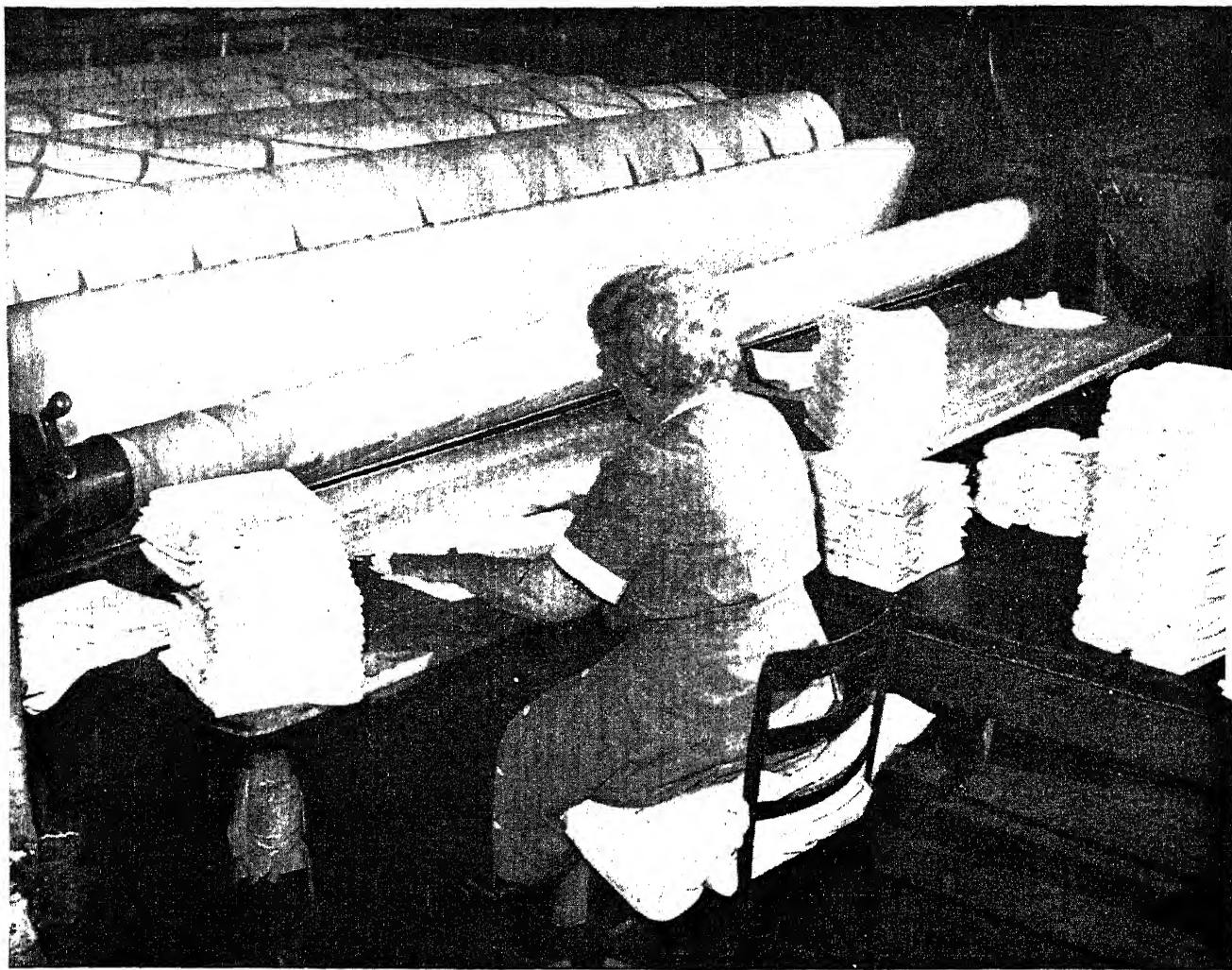
Galveston's docks have space for 100 ships, and huge export of flour (*above*) and oil, cotton and sulphur — an immense variety of Texas products goes out while bananas, raw sugar and Hindu jute pour in. Overseas traffic and coastwise shipping mingle here and meet railroad freight cars from the American South, East, Middle West, Plains, Mountains and Pacific slope.

CHAPTER EIGHT. BEHIND THE STREAMLINES



A dome train, arriving at Chicago from St. Paul at 2:40 p.m., and scheduled to leave an hour and twenty minutes later, must be washed outside, cleaned inside, checked and restocked. Ten minutes suffice to run it through the washing machine. (*Opposite page, lower left*) Electrical equipment is checked. (*Lower right*) Only diners are iced. The train itself is cooled by mechanical refrigeration.

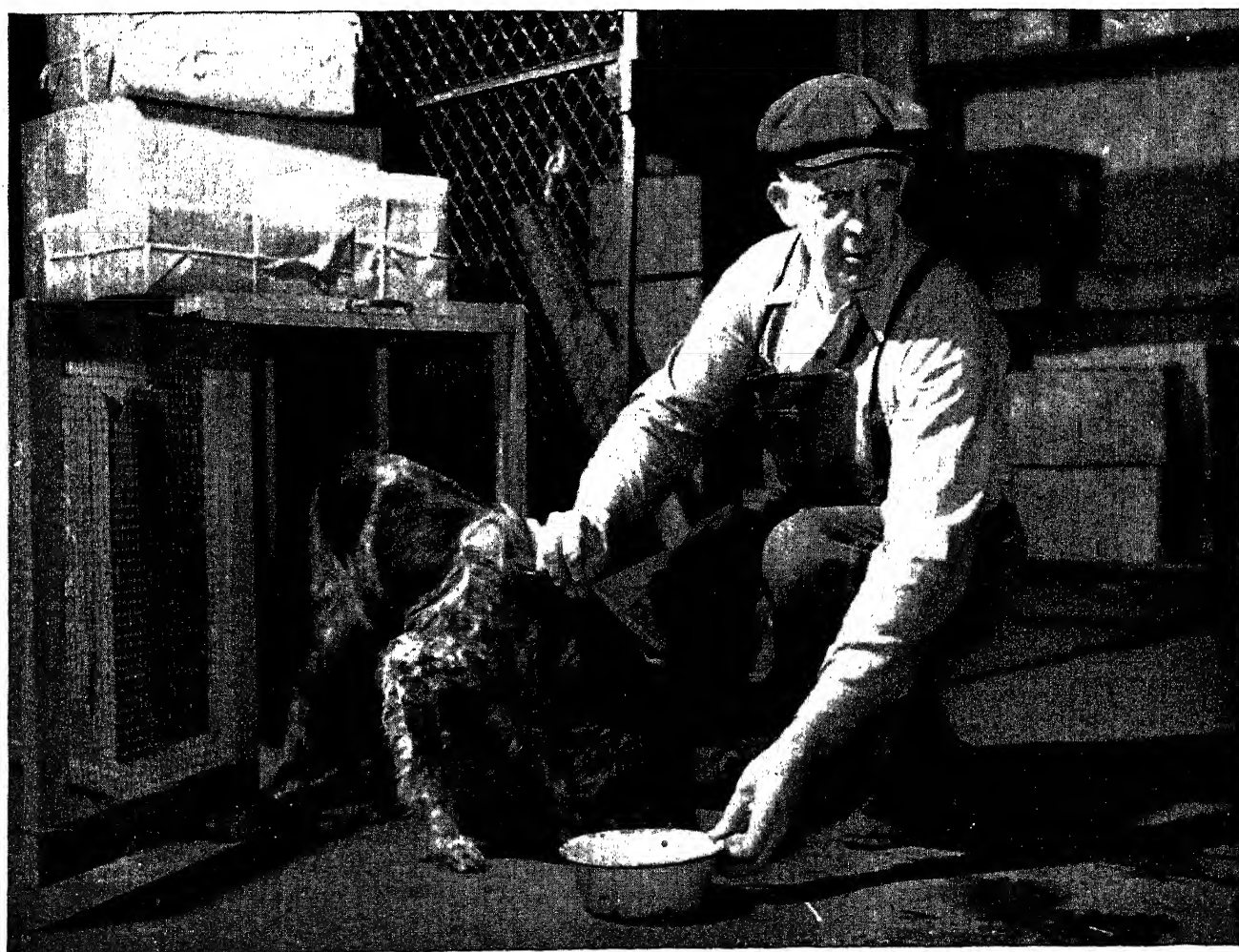


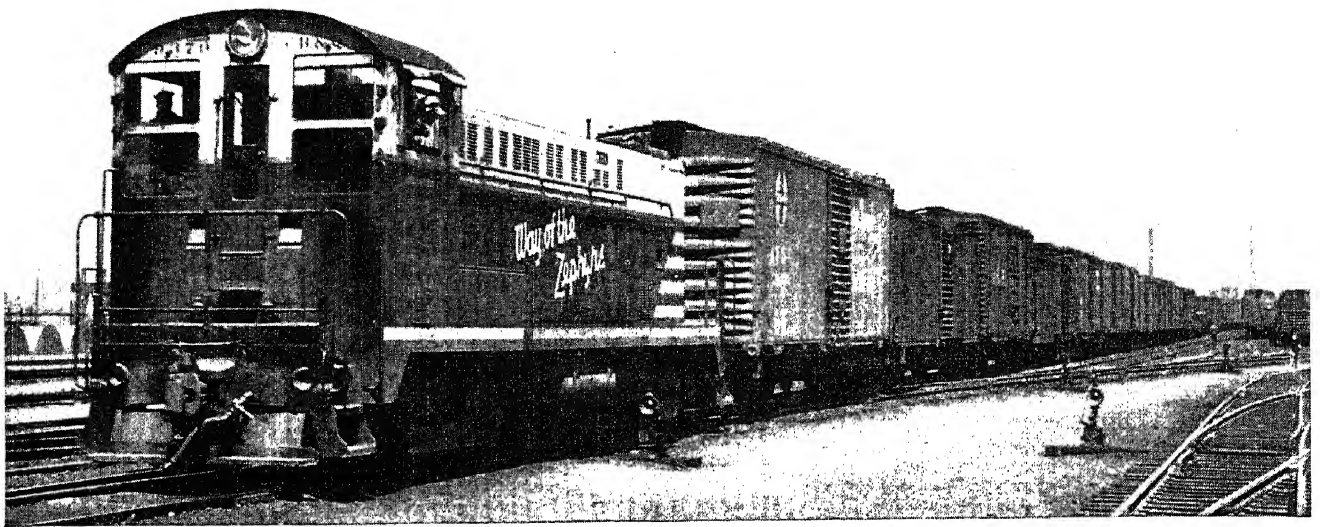


Nearly 6,000,000 pieces of linen, most of them from dining cars, are laundered yearly by the company. The Burlington does nearly a \$2,000,000 business annually in its diners, supplied from the commissary (*left*).

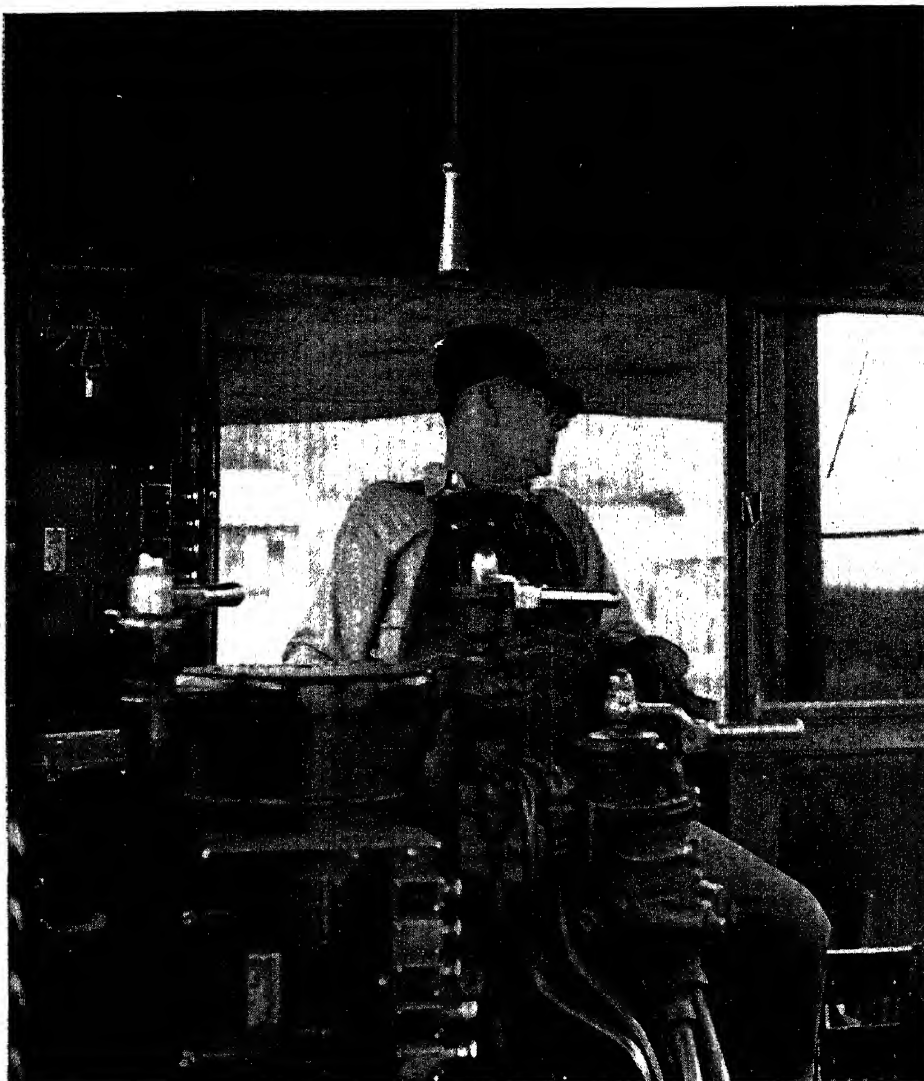


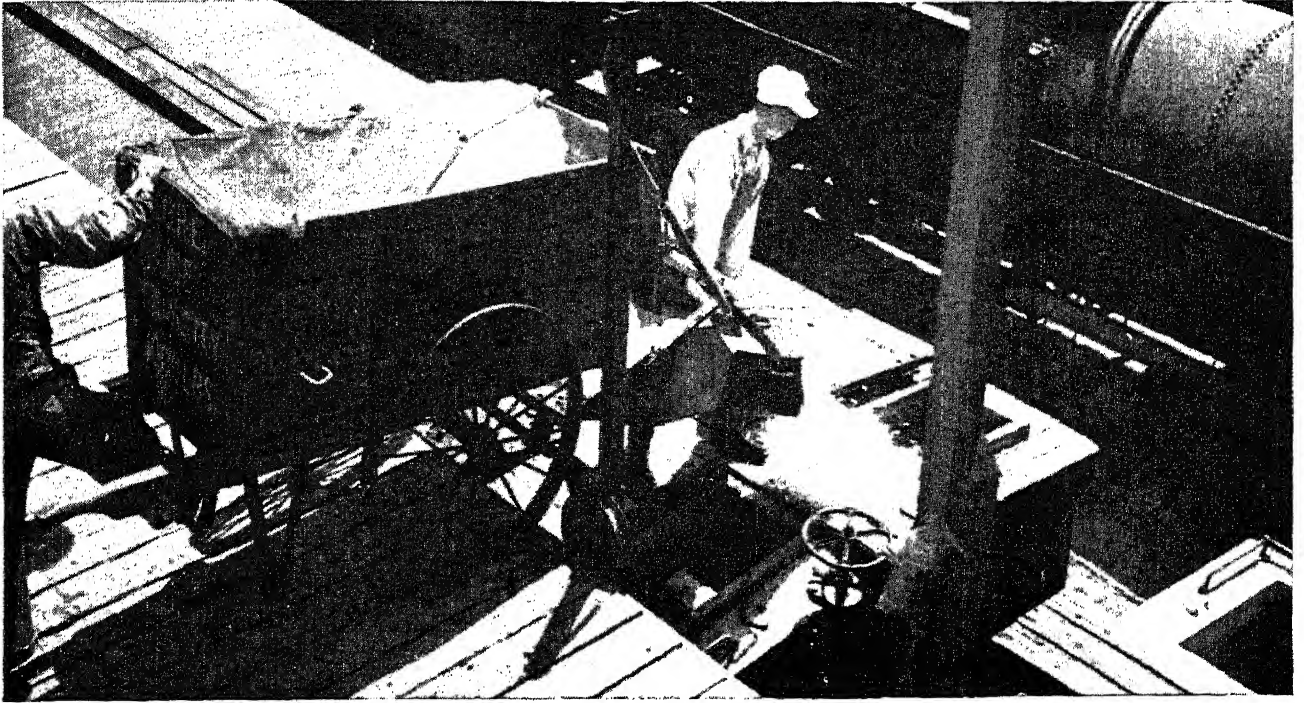
The railroad has the responsibility of sorting mailbags. Traveling dogs are cared for either by train baggage men or by express messengers.



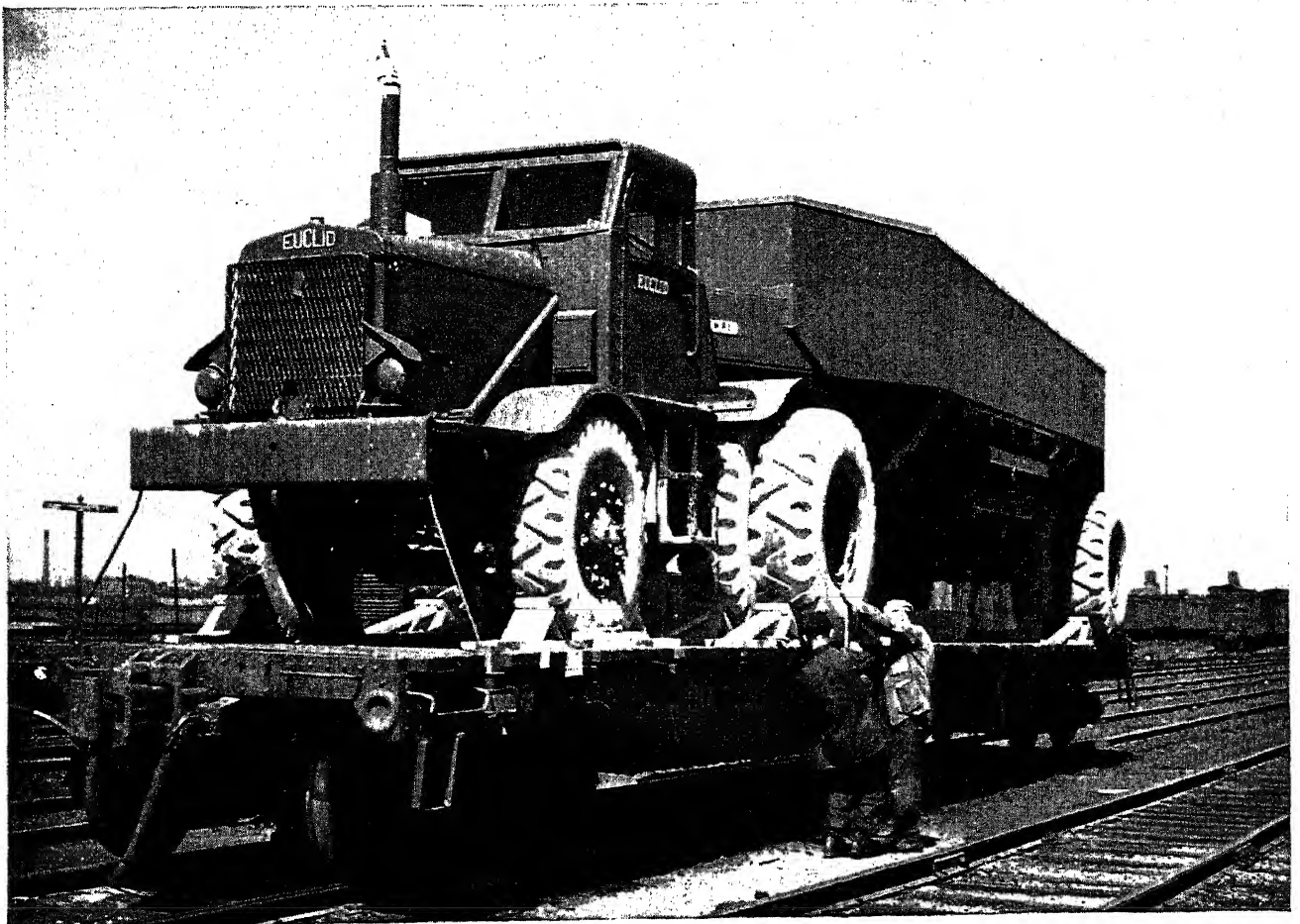


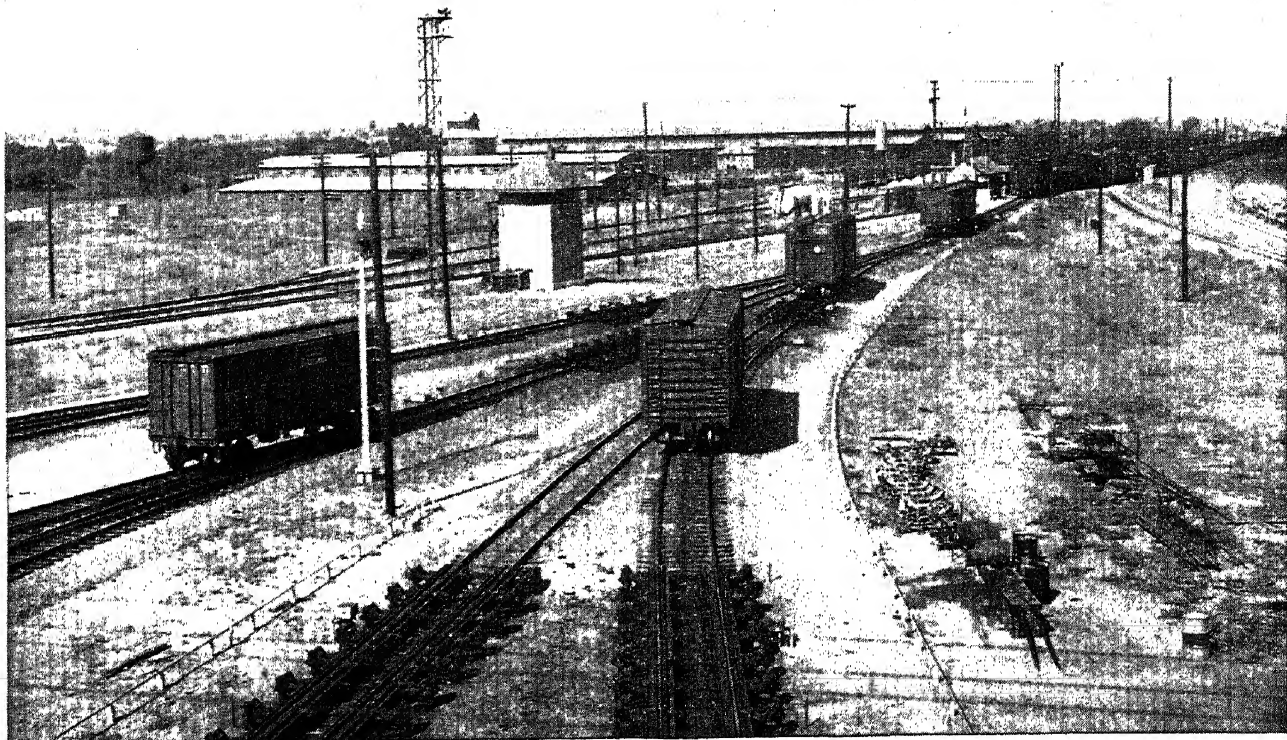
A switch engine pulling a "cut" of cars. (*Below*) To the right of the engineer is the operating control; directly in front of him is the straight air valve which brakes the engine only; in front of his left hand is the automatic air valve which brakes both engine and cars; above his head hangs the whistle cord, and below to his left are fusees for signaling.



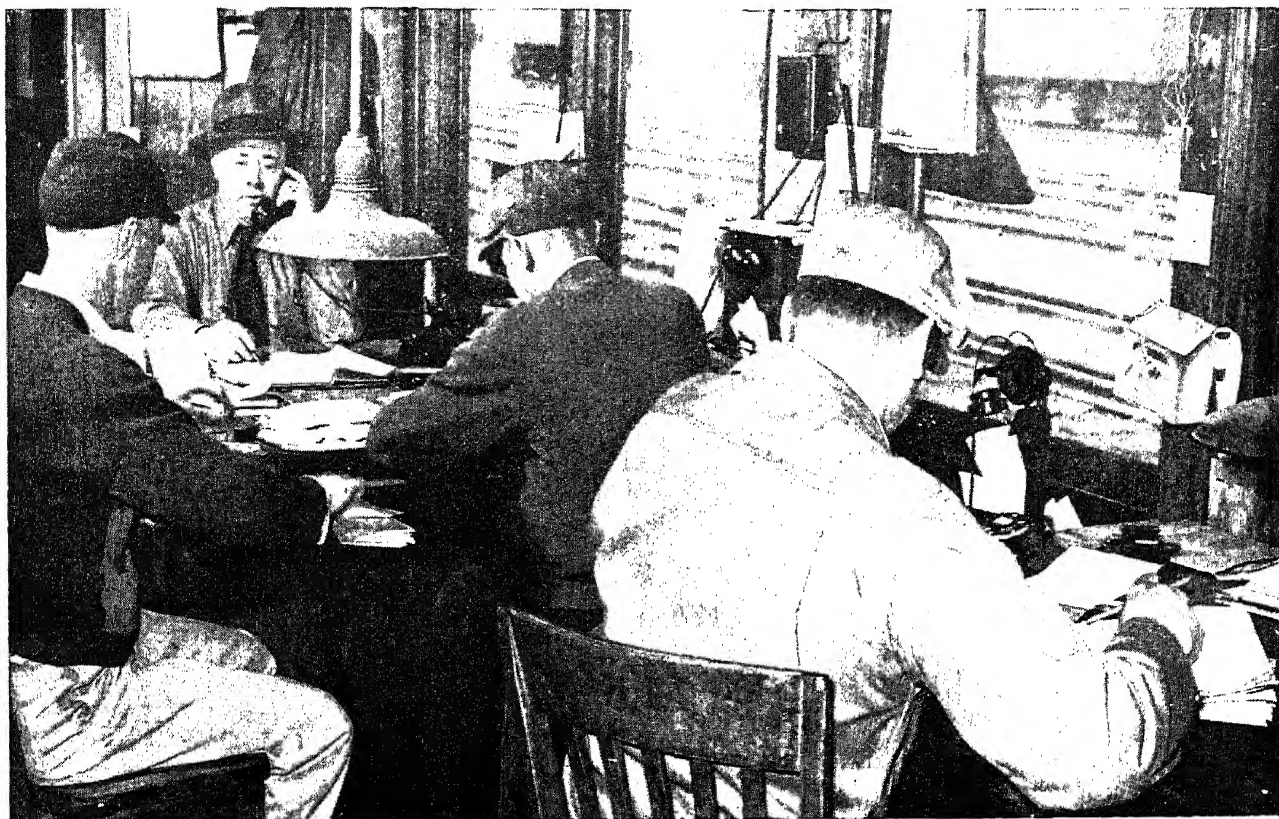


(Above) Pouring crushed ice into the bunkers of a refrigerator car at Lincoln. Cars in transit are refilled, usually with block ice, at least once daily at icing stations. Over a lading of fruits and vegetables is blown a thick layer of snow ice. (Below) The load of a flatcar must be checked for clearance, to make sure that it does not project at any point beyond the edges of the car floor.

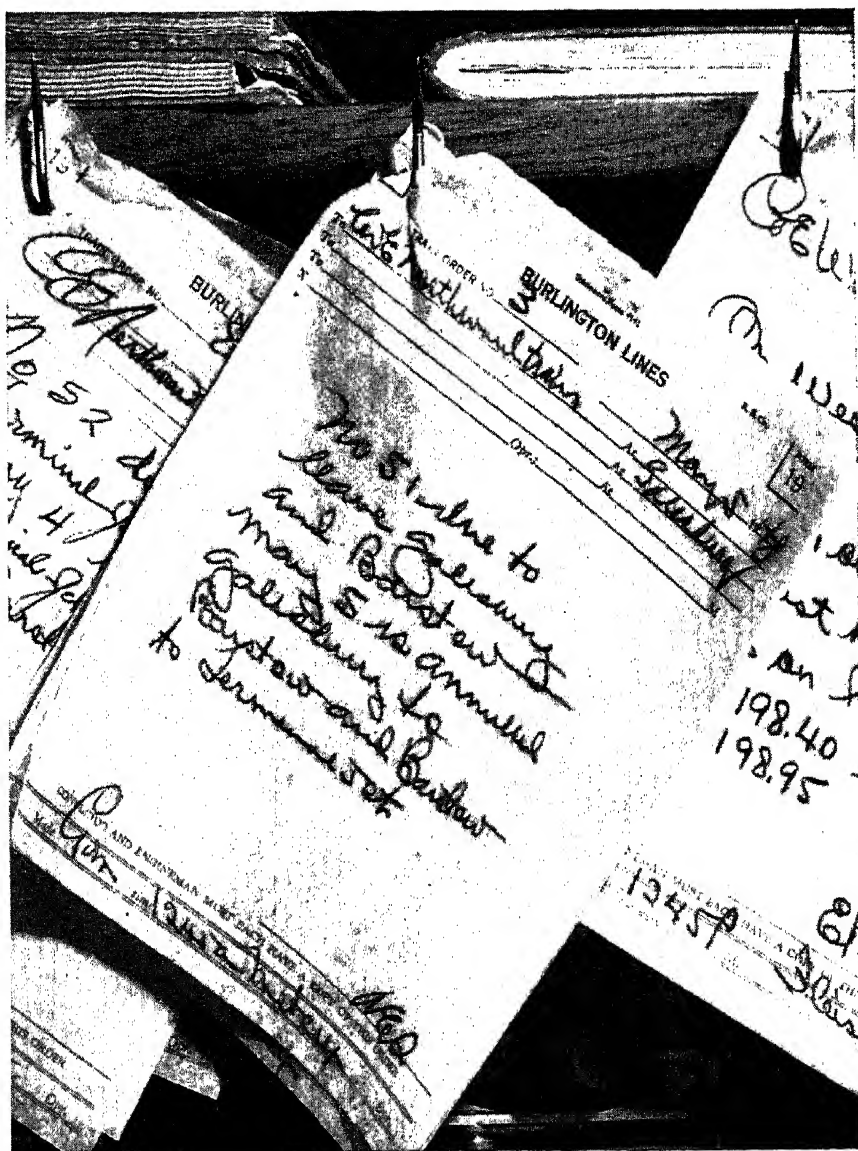


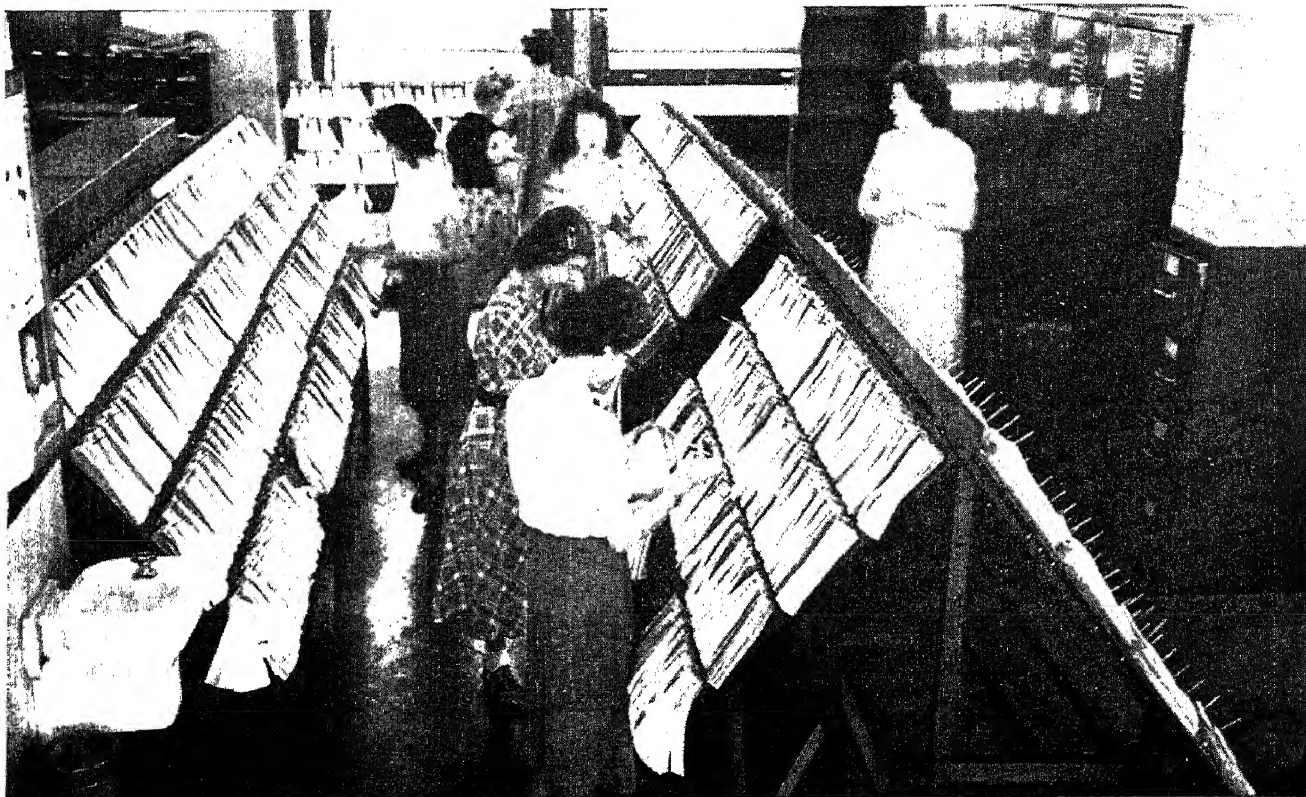


A hump yard is an installation for quick, efficient sorting of freight cars into trains bound for different destinations. Here, at Lincoln, Nebraska, a long string of loaded cars is slowly pushed up an incline over the hump. As each car coasts down, it is switched to one of thirty-six different tracks by the men in the control tower (the small square building in the center of the picture). They operate both the switches and the retarders, pneumatically controlled snubbing devices on either side of the track which slow down or stop a car.

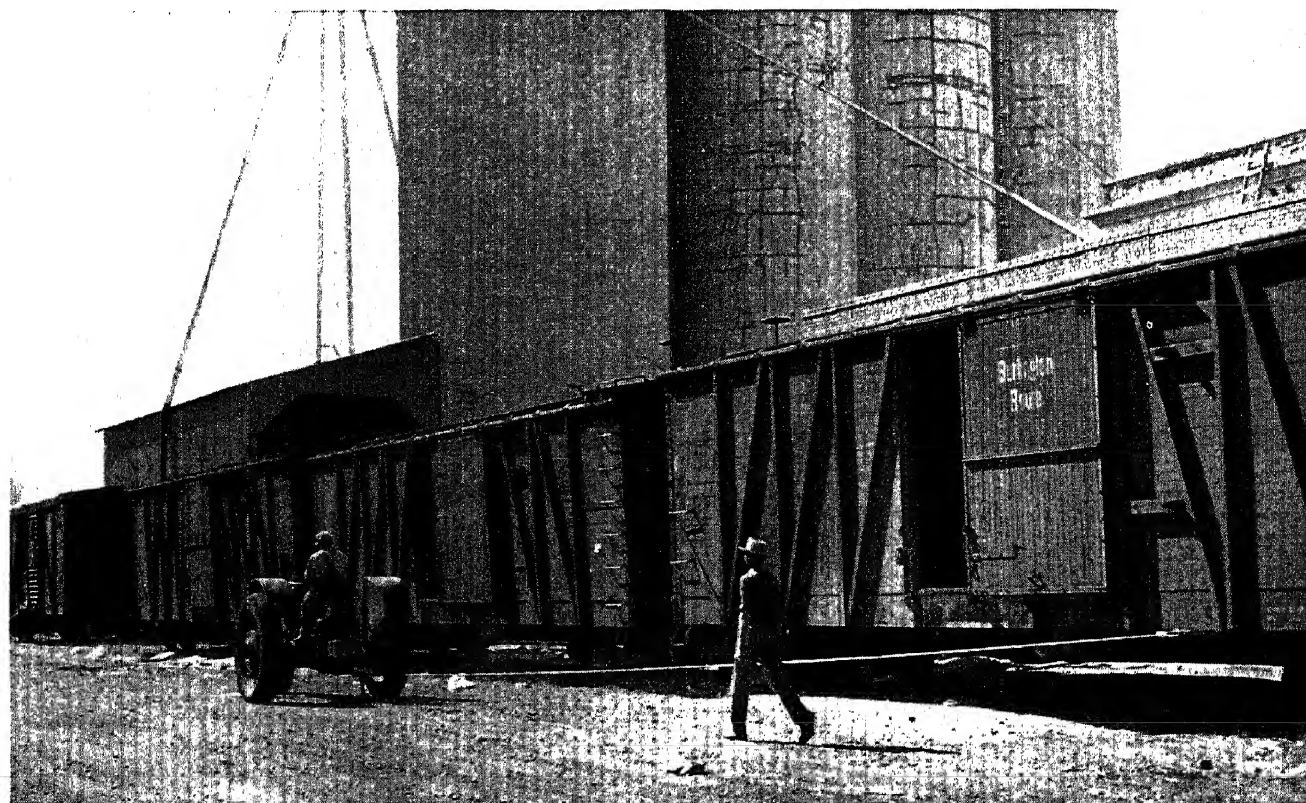


(Above) A yardmaster and his assistants check train sheets, noting and passing on all information relating to the movement of freight cars. (Right) A few of the day's train orders in the division dispatcher's office at Galesburg, Illinois. Order No. 3 means that since No. 51, a "superior" train having precedence over freights and locals, has been annulled, other trains may move without regard to its schedule.



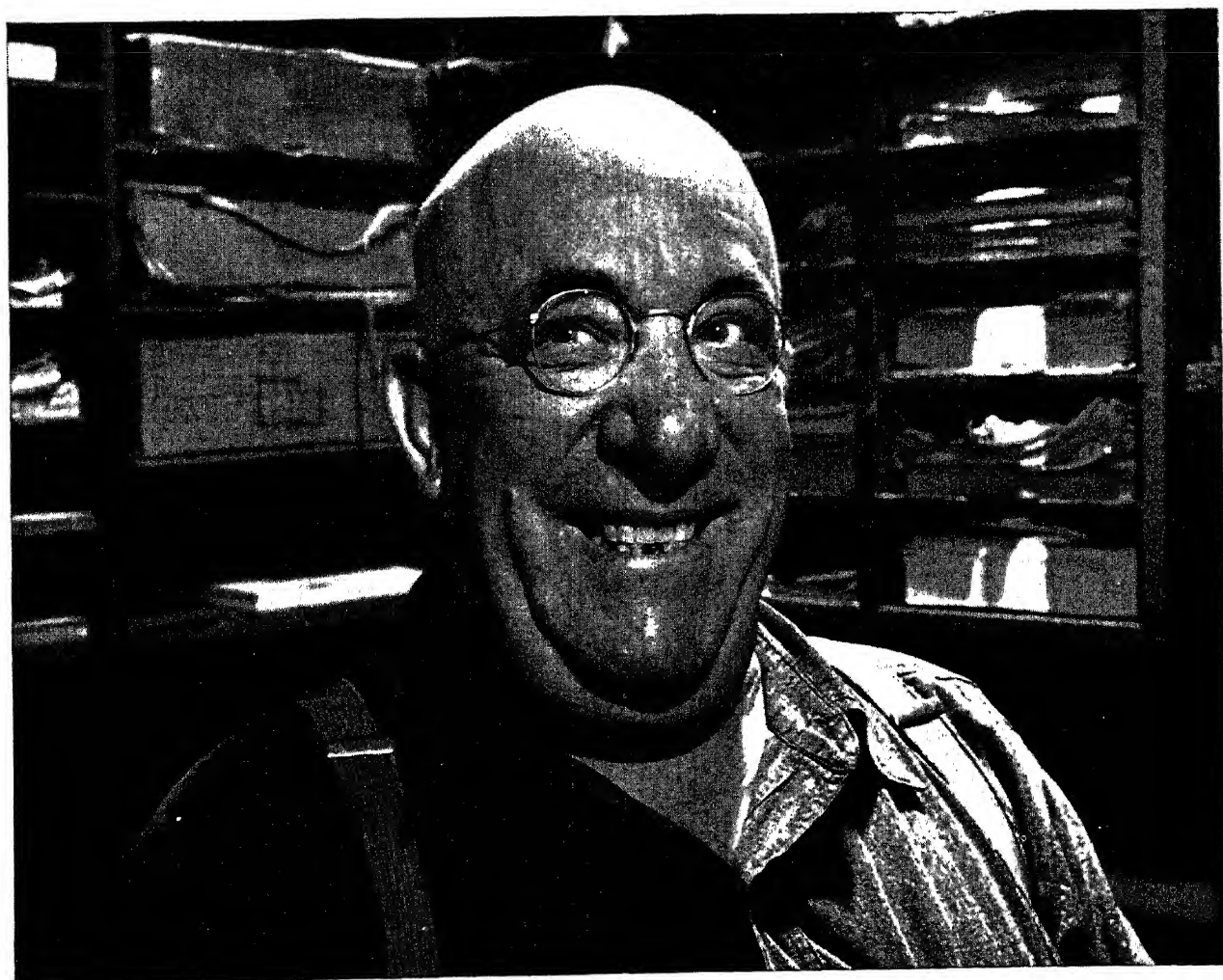


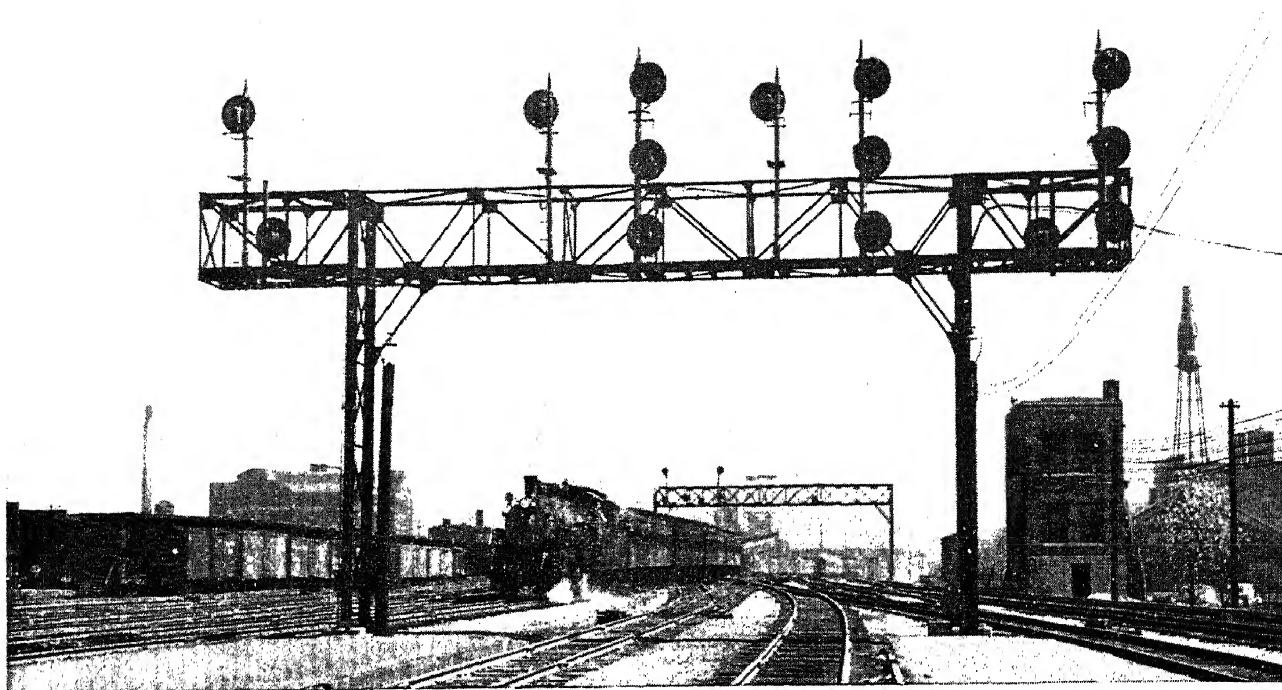
In the office of the Superintendent of Transportation at Chicago (*above*) are filed daily slips which describe the movement and location of every freight car on the Burlington lines, whatever road it belongs to, as well as slips locating all Burlington cars, wherever they happen to be in the country. Among them will be reports on these empties at Vernon, Texas, being towed by a tractor into the filling shed of a grain elevator. For every car on its lines belonging to another road, the Burlington pays a daily rental of about \$1.50, and receives a like amount for each of its own cars on other lines.



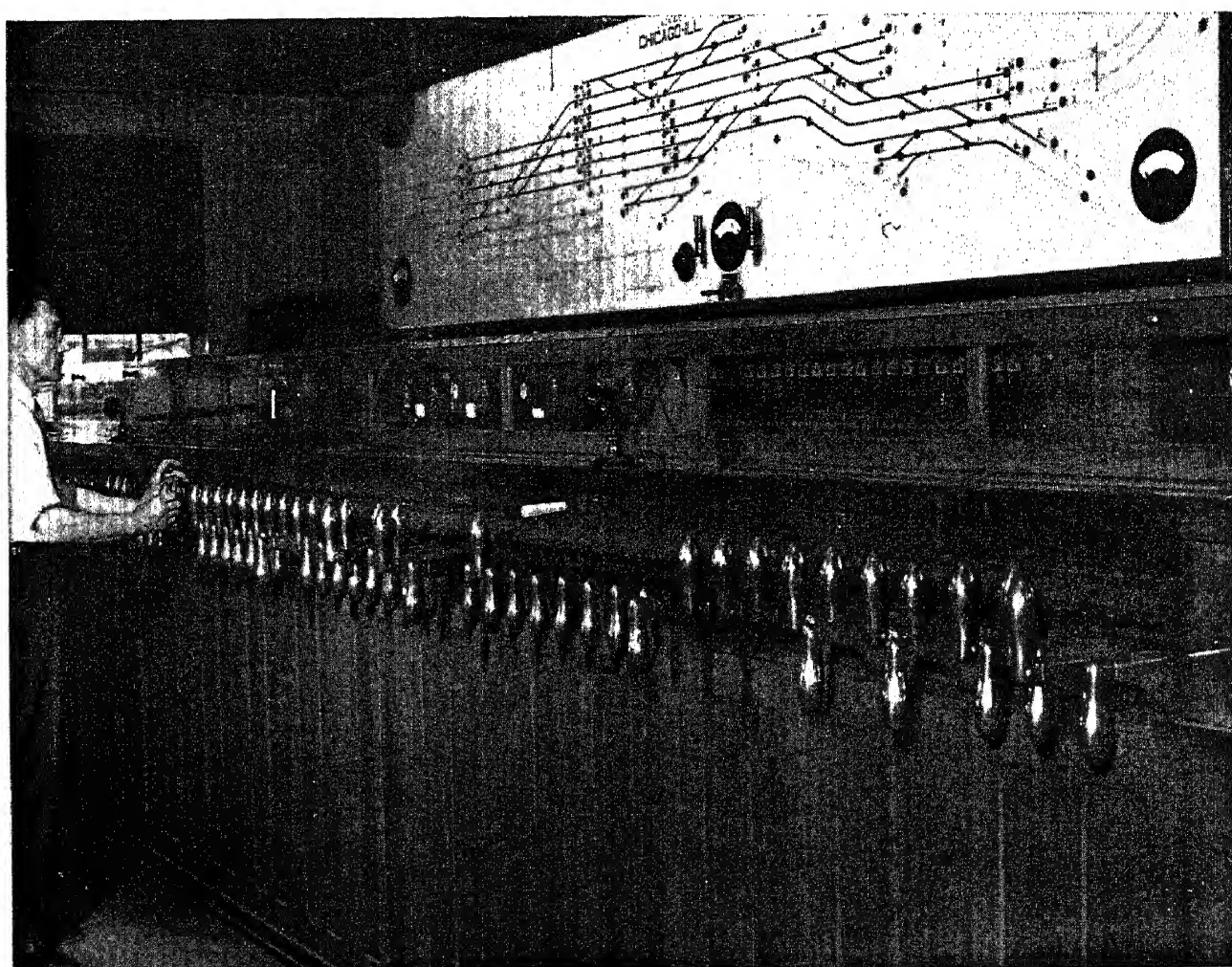


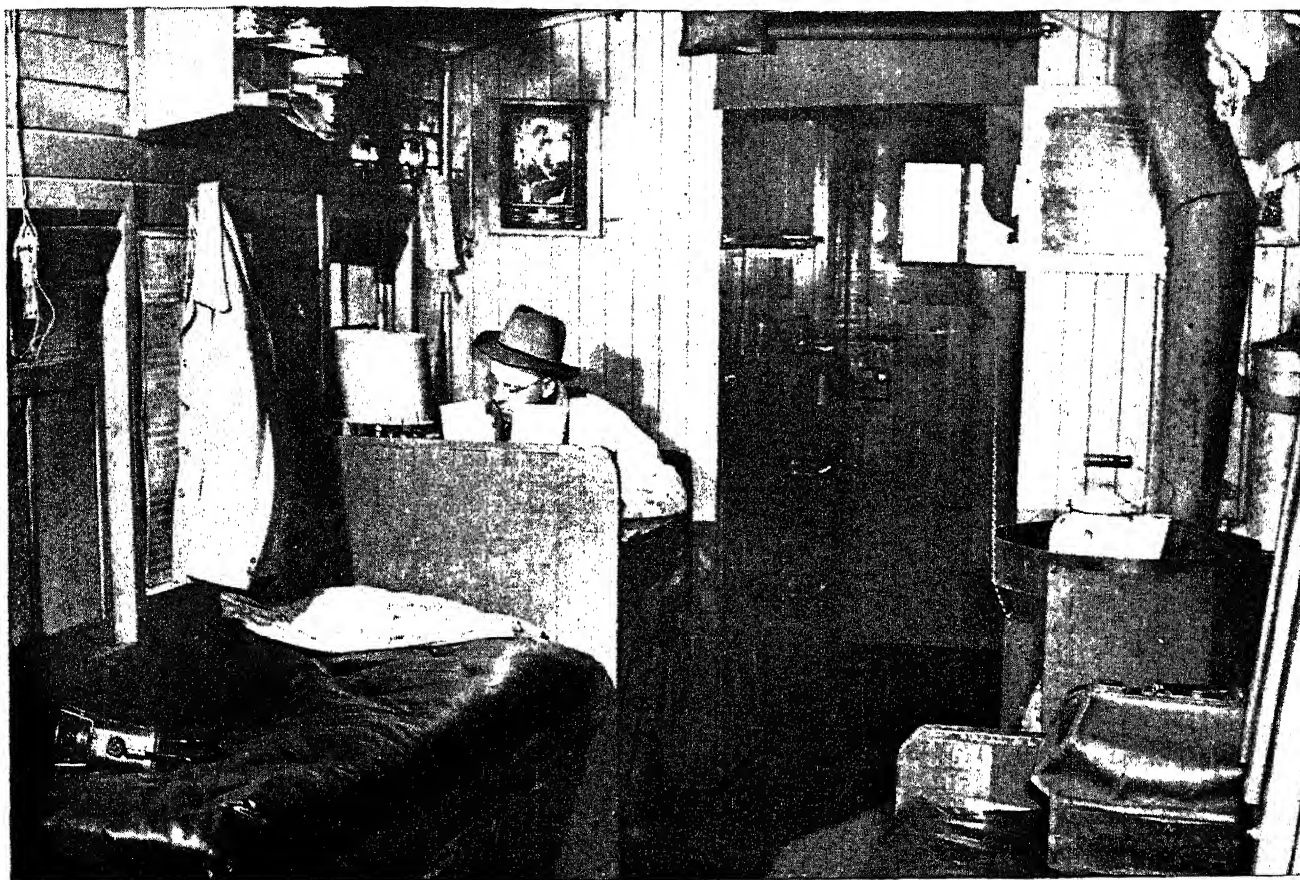
(Above) The stenographic pool at the Burlington general offices, Chicago.
(Below) An office worker at Princeton, Illinois.





(Above) The signal bridge at Union Avenue, Chicago, with the control tower to the right, and a suburban train pulling out. The Burlington was the first road to signal multiple tracks for train movements in either direction. (Below) The electro-pneumatic switch machine in the control tower. The levers control all switches and signals, and on the big board lights flash as a train passes the various clearing points.



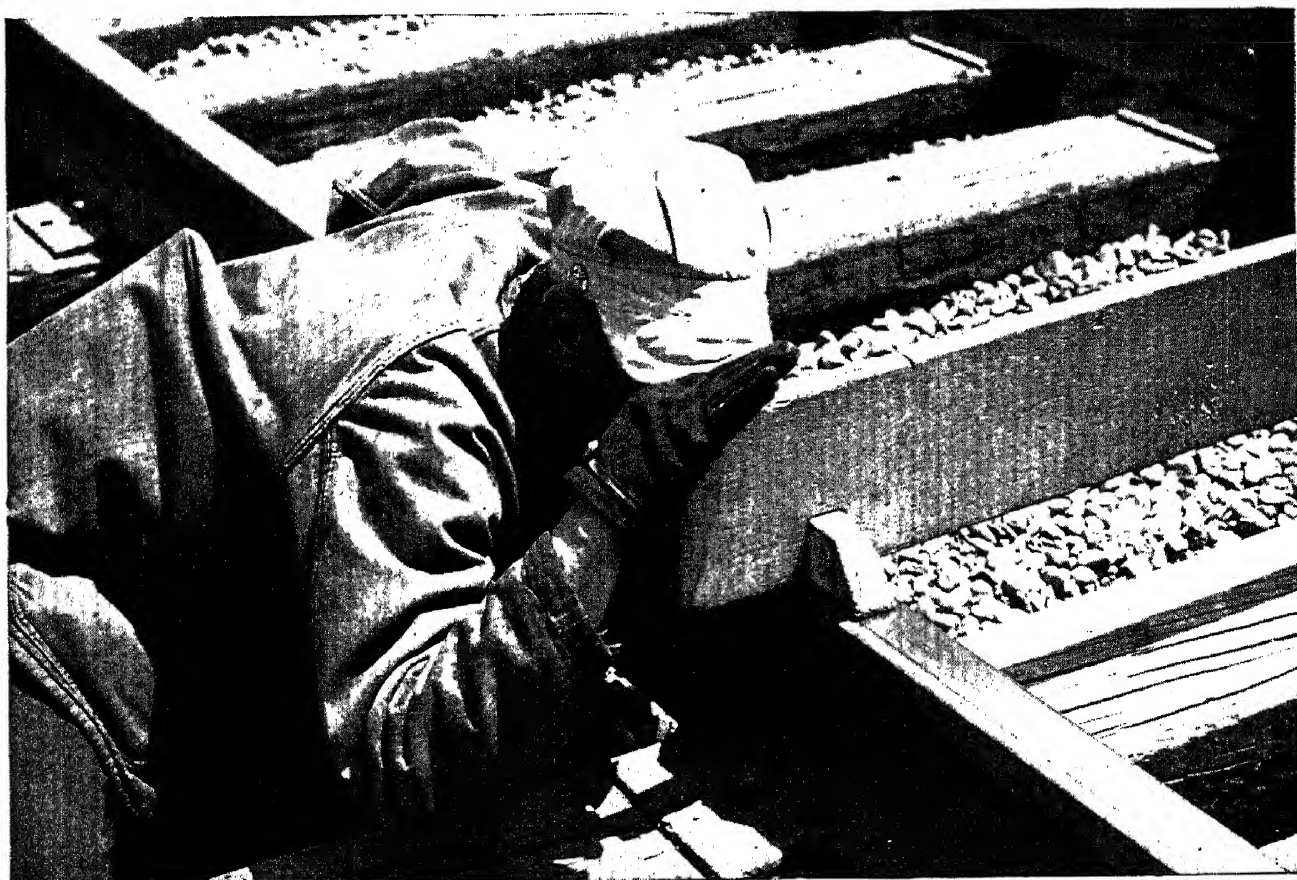


Inside a way car or caboose the conductor (*above*) prepares his train reports which give the initials and number of each car in his train, where it was originally loaded, where he picked it up, its contents, "where he set it out," and its destination. (*Right*) In the "high seat" of the way car, the brakeman watches the train ahead for hotboxes or other mishaps.



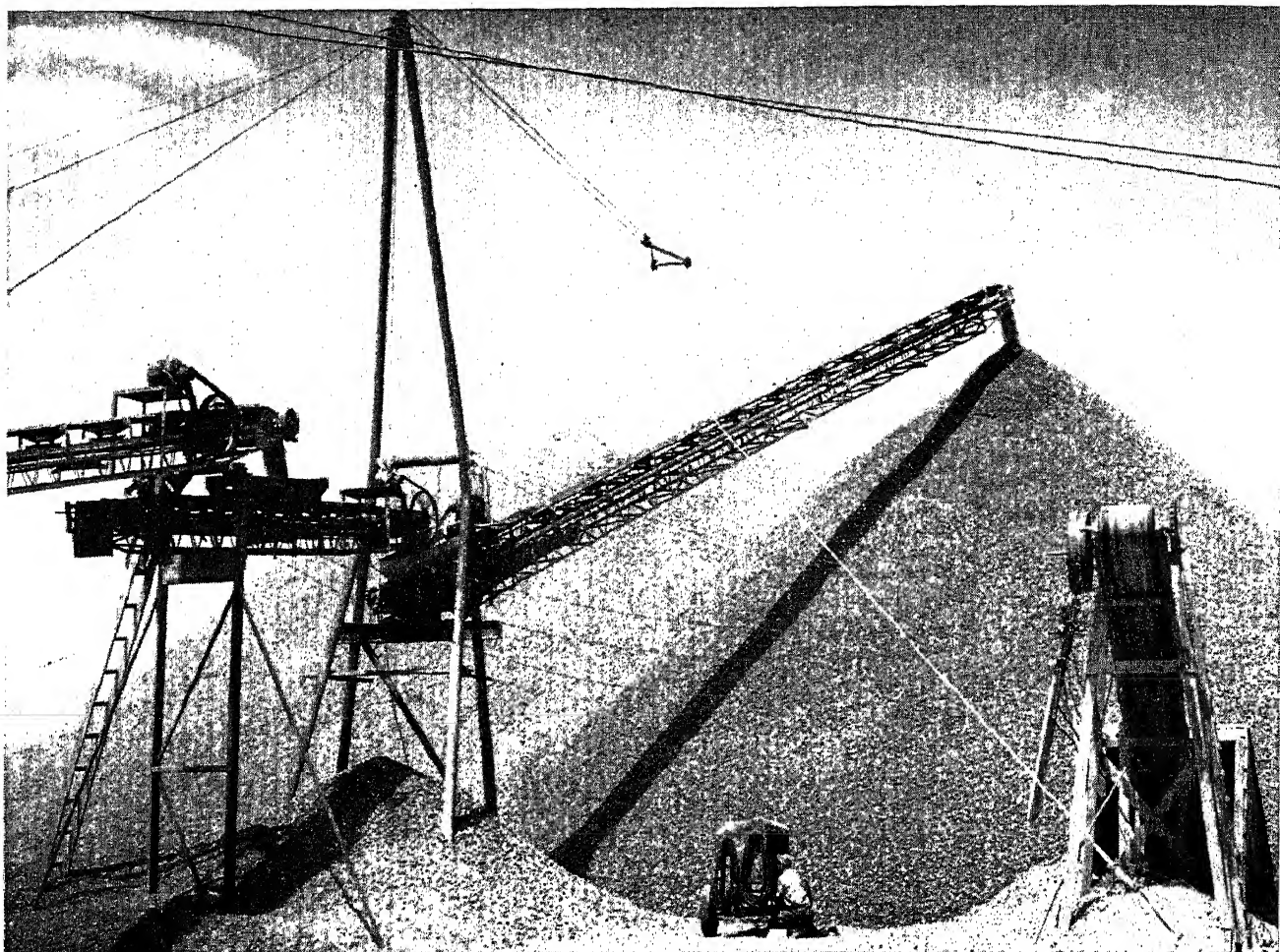


(Above) "Gandy-dancers" of a surfacing gang, at Nodaway, Iowa, polished up for dinner, walk to their mess car. (Below) The assistant foreman of the gang, sighting over a board to another board three rail lengths away, signals for the track to be raised so that the surface will be uniform.





Heaving on a tie-spacer.

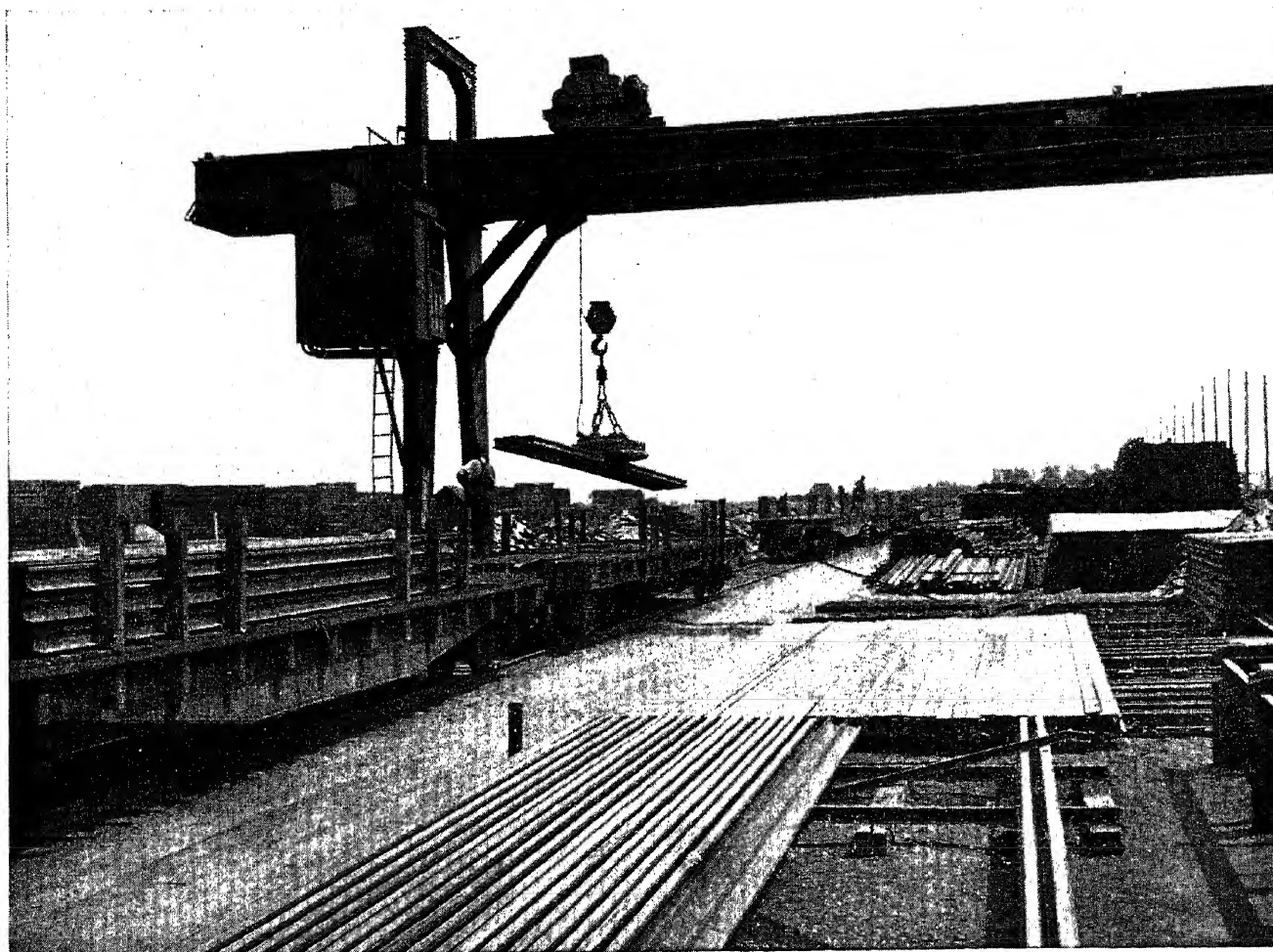


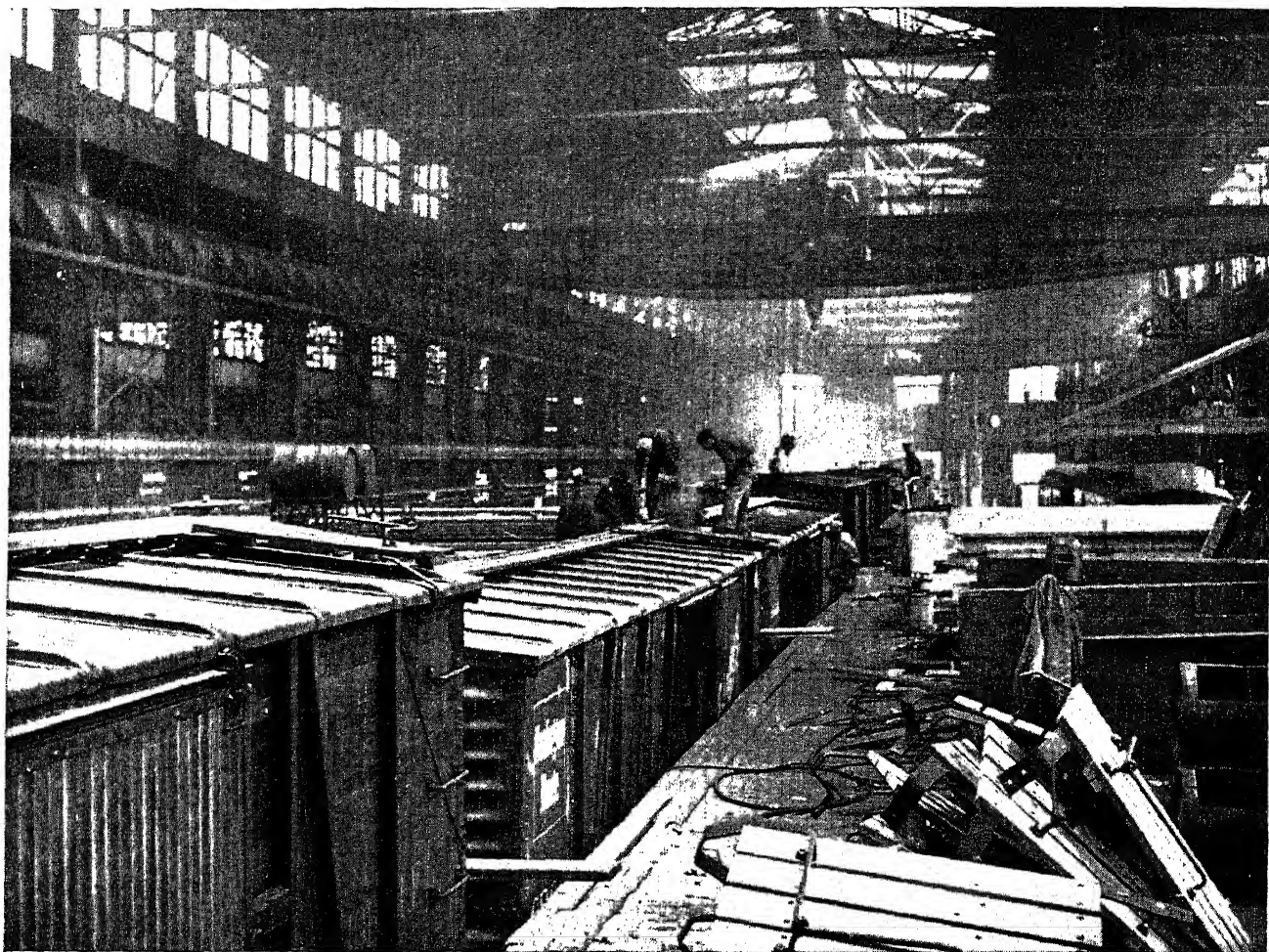
(Above) Ballast rock at the pits near Gillette, Wyoming.
(Below) 1,000,000 to 1,250,000 ties are laid yearly.





(Above) Tamping drill holes in the Burlington coal mine at Valier, Illinois. Coal comprises 25 per cent of Burlington freight car loadings. (Below) Electromagnetic crane in the material yards, Havelock, Nebraska.

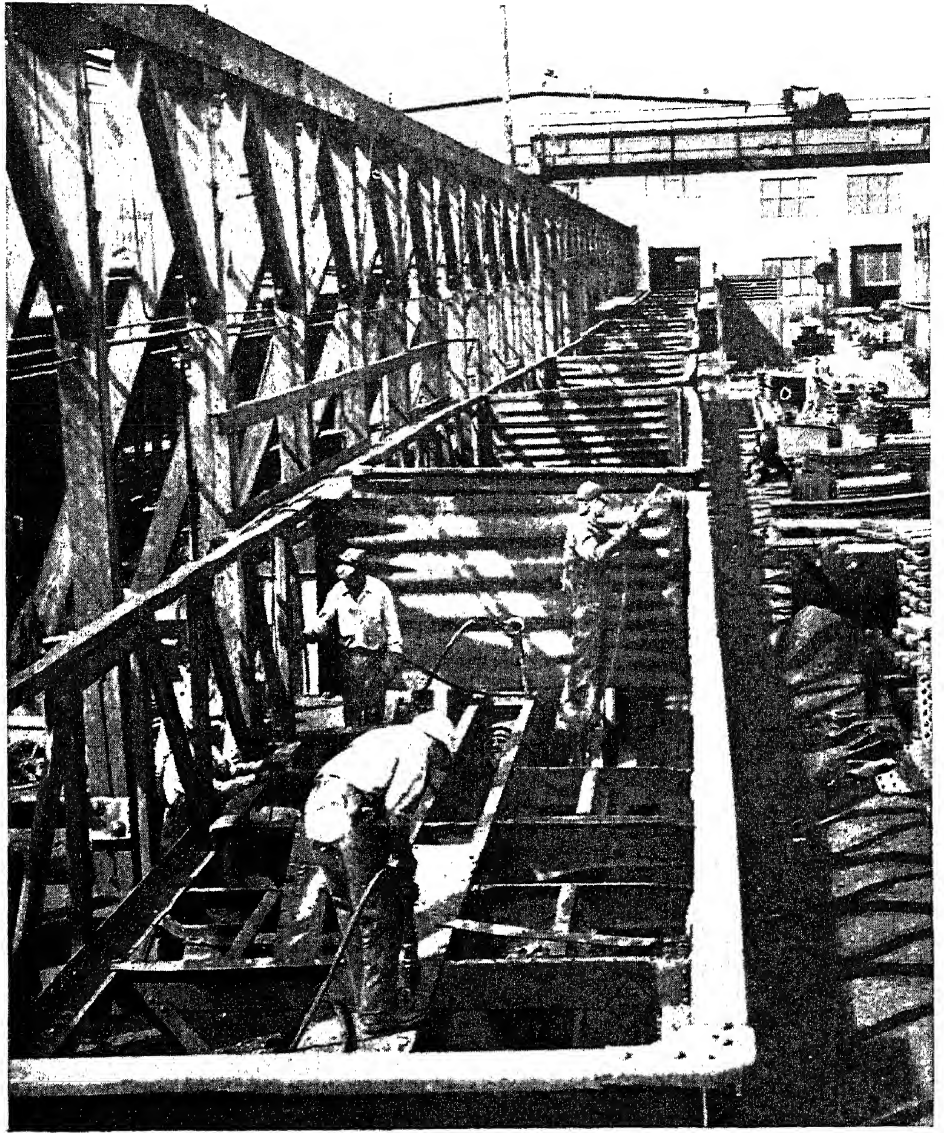




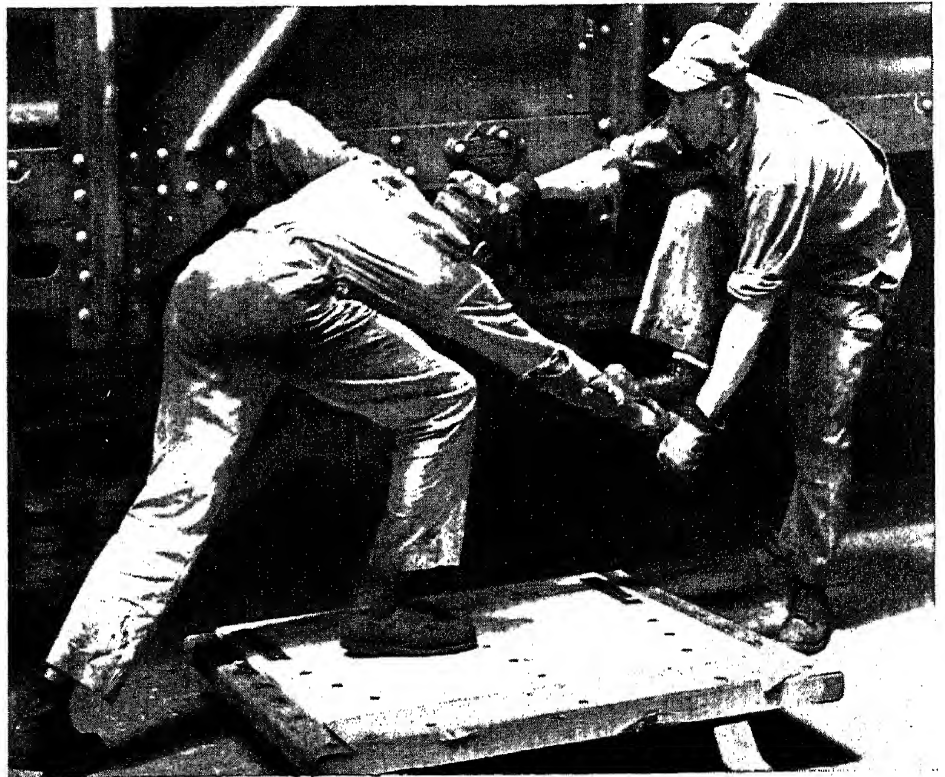
(Above) Slowly moving along on the assembly line at Havelock, Nebraska, twenty-five boxcars are virtually rebuilt daily. (Below) Fitting new floors to a boxcar.

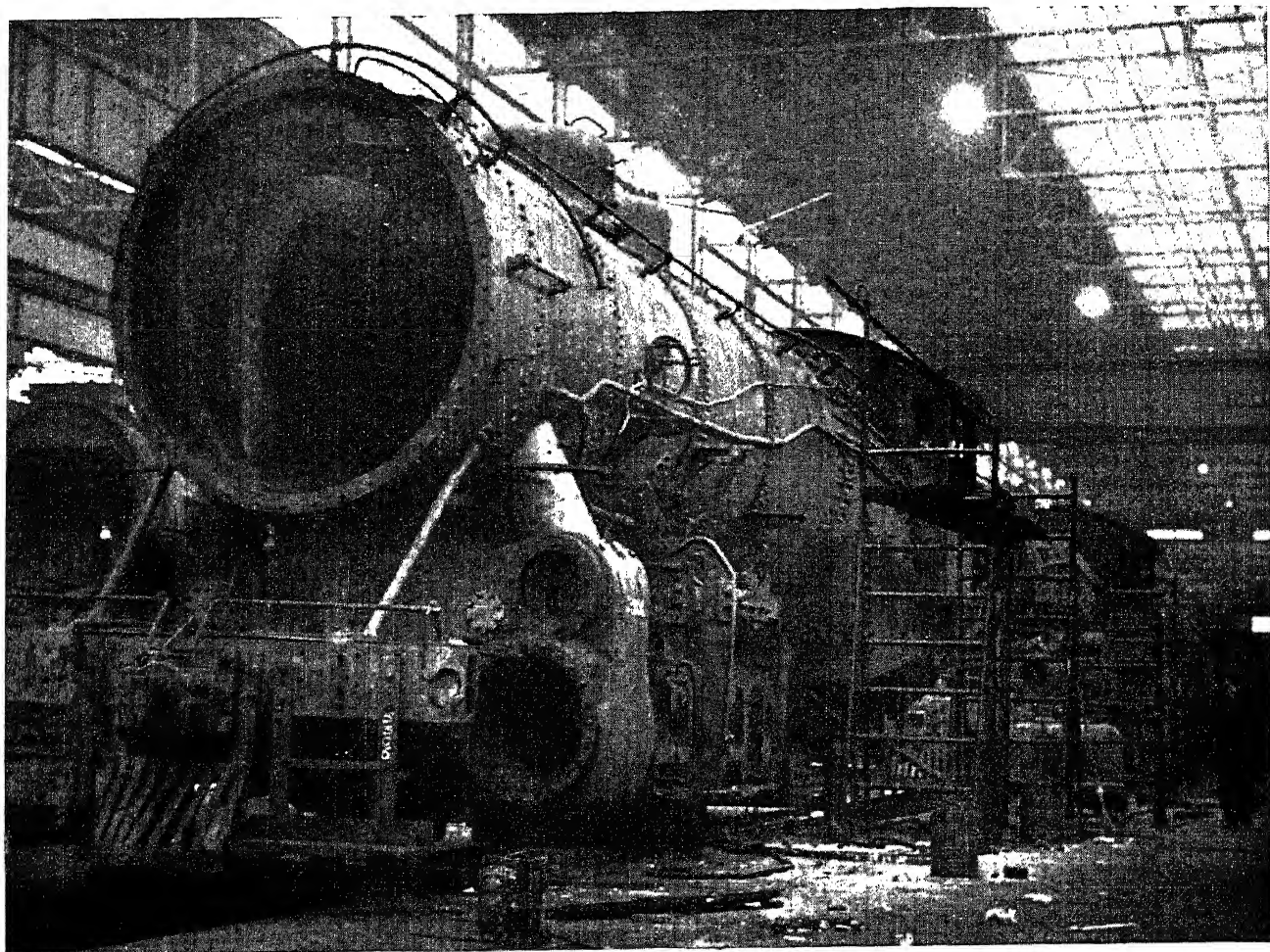


Removing the rusted plates of gondola cars before they enter the assembly line for reconstruction.



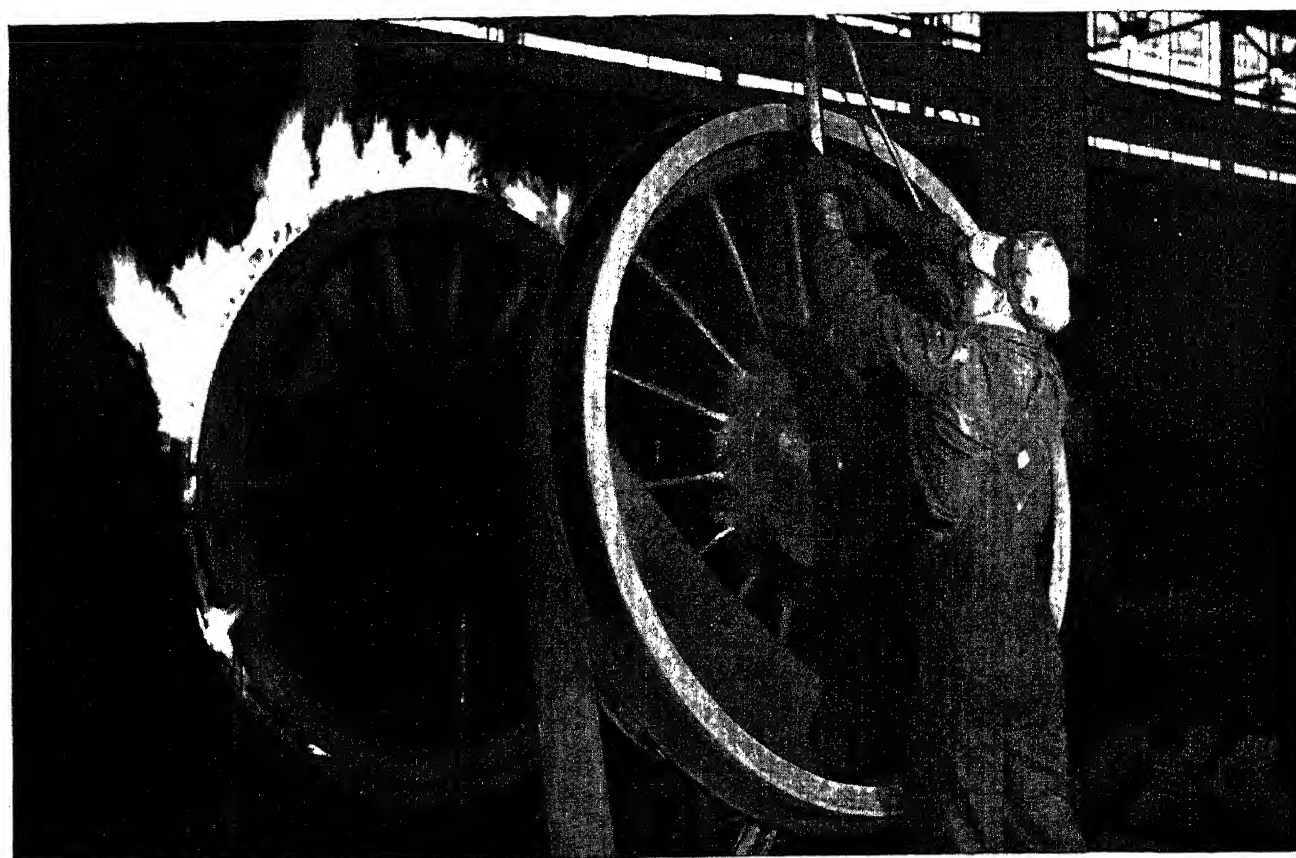
Fitting new dump doors to a hopper-bottom car.

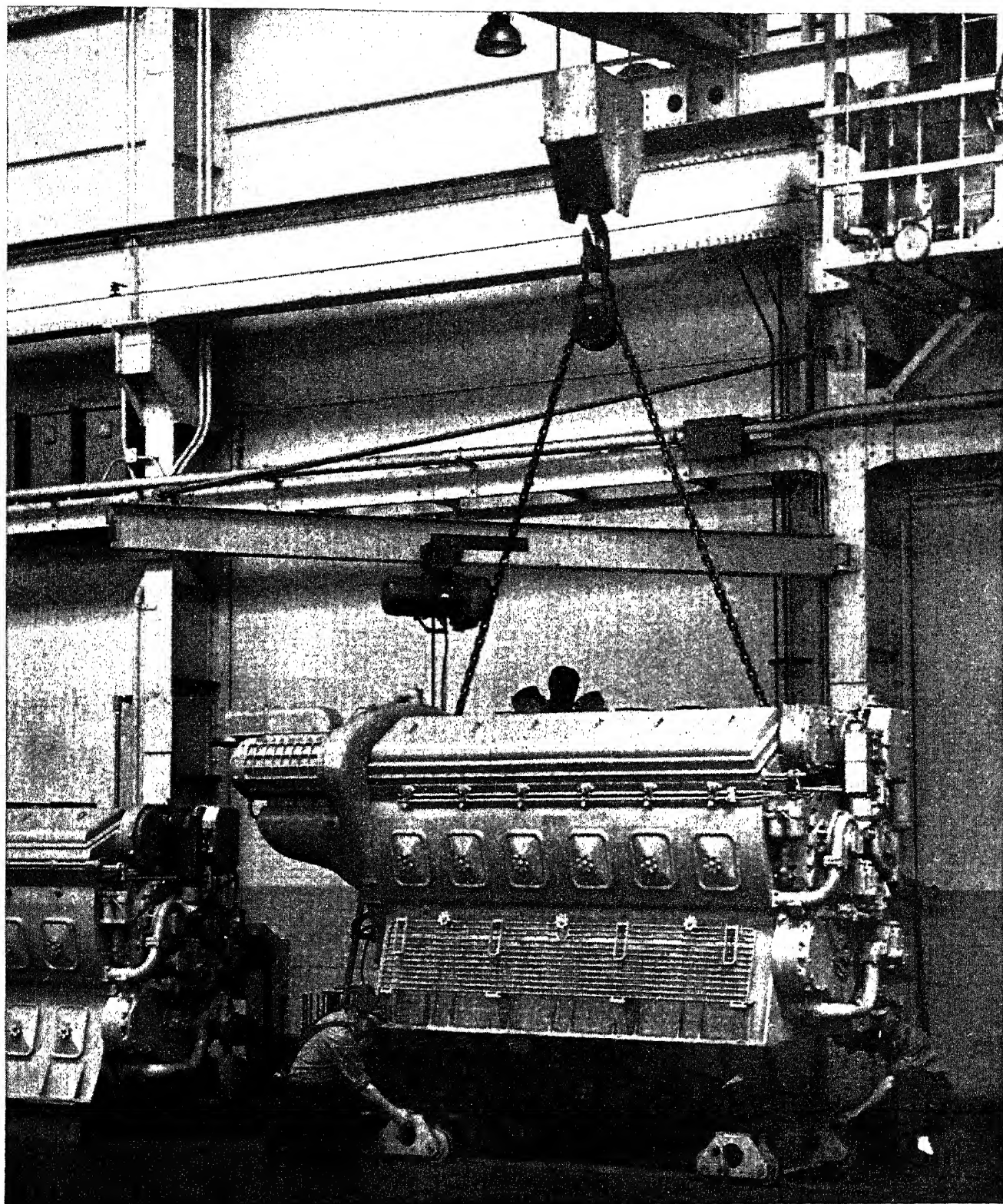




(Above) Steam locomotives undergo heavy repairs about every 150,000 miles.

(Below) Shrinking a steel tire on a driving wheel center, an operation which must be repeated every five years.

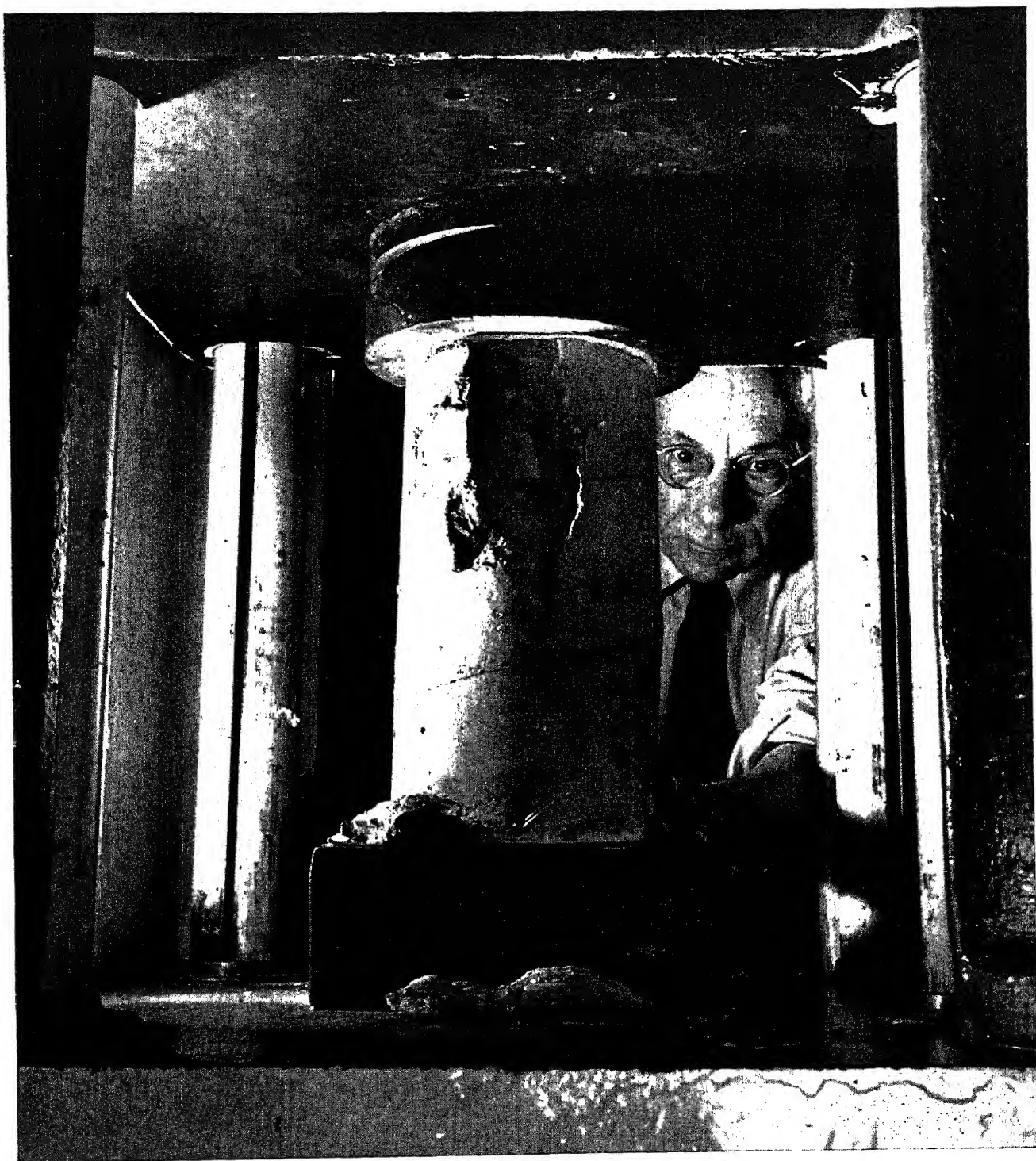




Overhauling a complete Diesel power plant which has been lifted out of the locomotive and replaced with another engine. Diesels require general repairs on an average of about every million miles. In passenger service they will operate as high as 350,000 miles per year and in freight service approximately 170,000 miles per year, as against steam engines which are available 120,000 miles per year. Higher in original cost than steam, Diesels, because of their higher thermal efficiency, have proved so economical in operation that since 1939 the Burlington has ordered no new steam locomotives.



Calipering the crankshaft of a Diesel unit in the shops at West Burlington, Iowa.

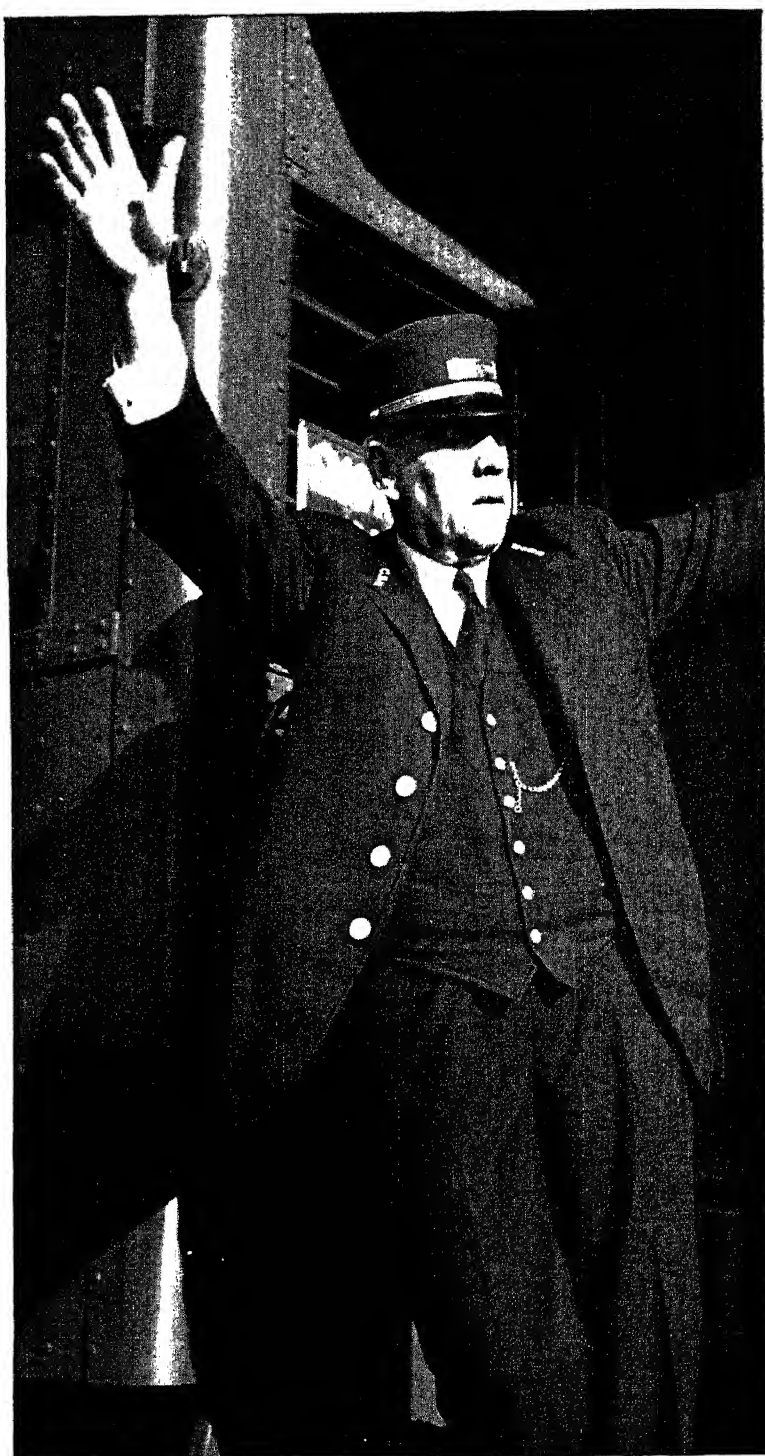


In the laboratories in the Burlington storehouse at Aurora, Illinois, a physicist tests the strength of a concrete core.



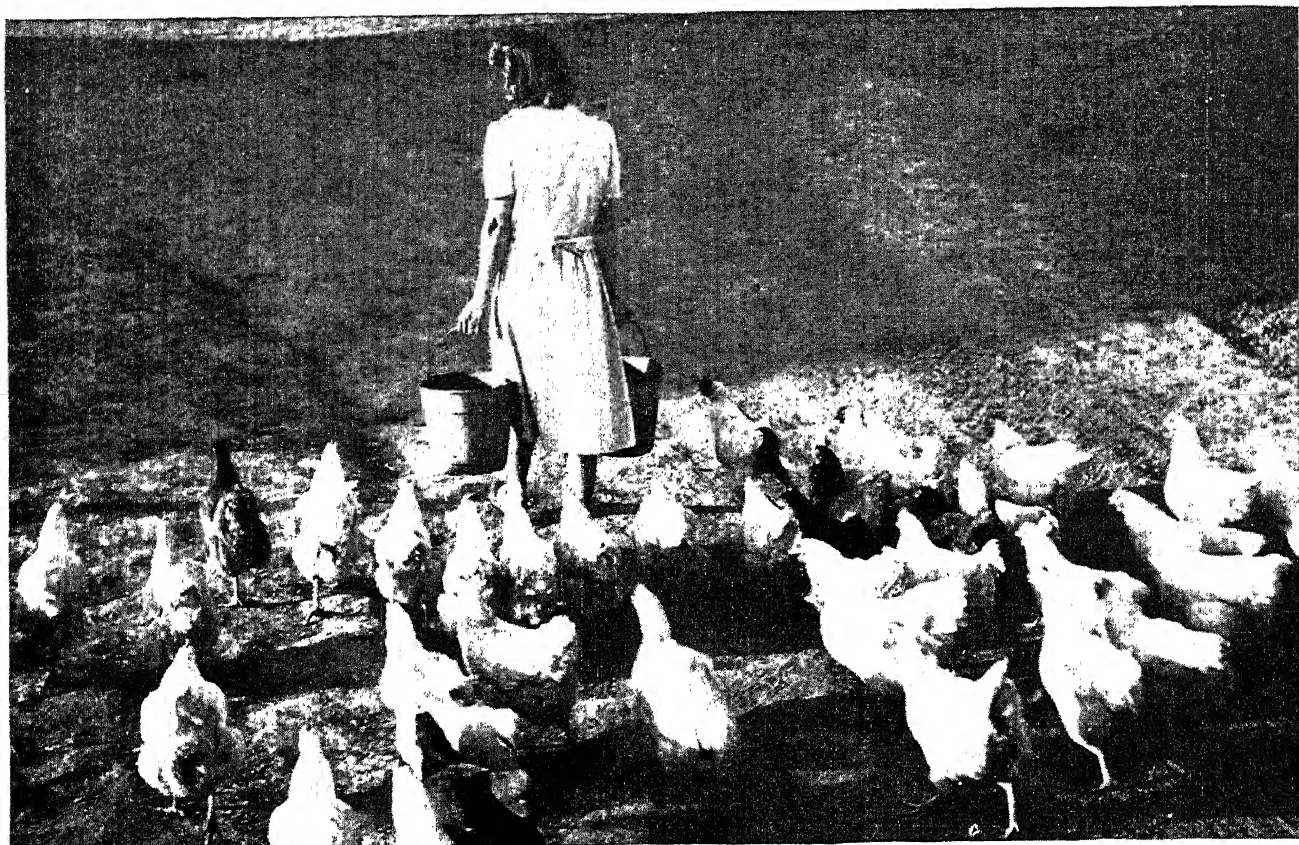
A reincarnated railroad man of a century ago, confused by the techniques and complications of a modern system, would gratefully recognize the familiar duties and gestures of two employees, the flagman, with flag and signal kit, standing behind a stopped train . . .

and the conductor giving a signal to the engineer to "slack ahead" (go forward slowly).

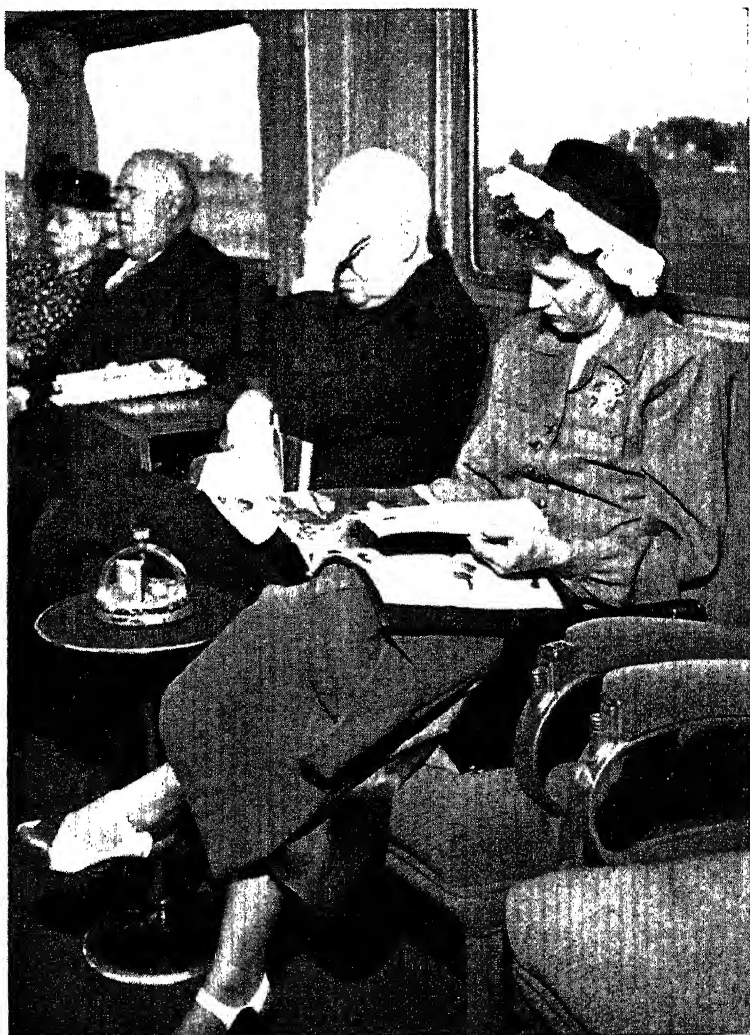


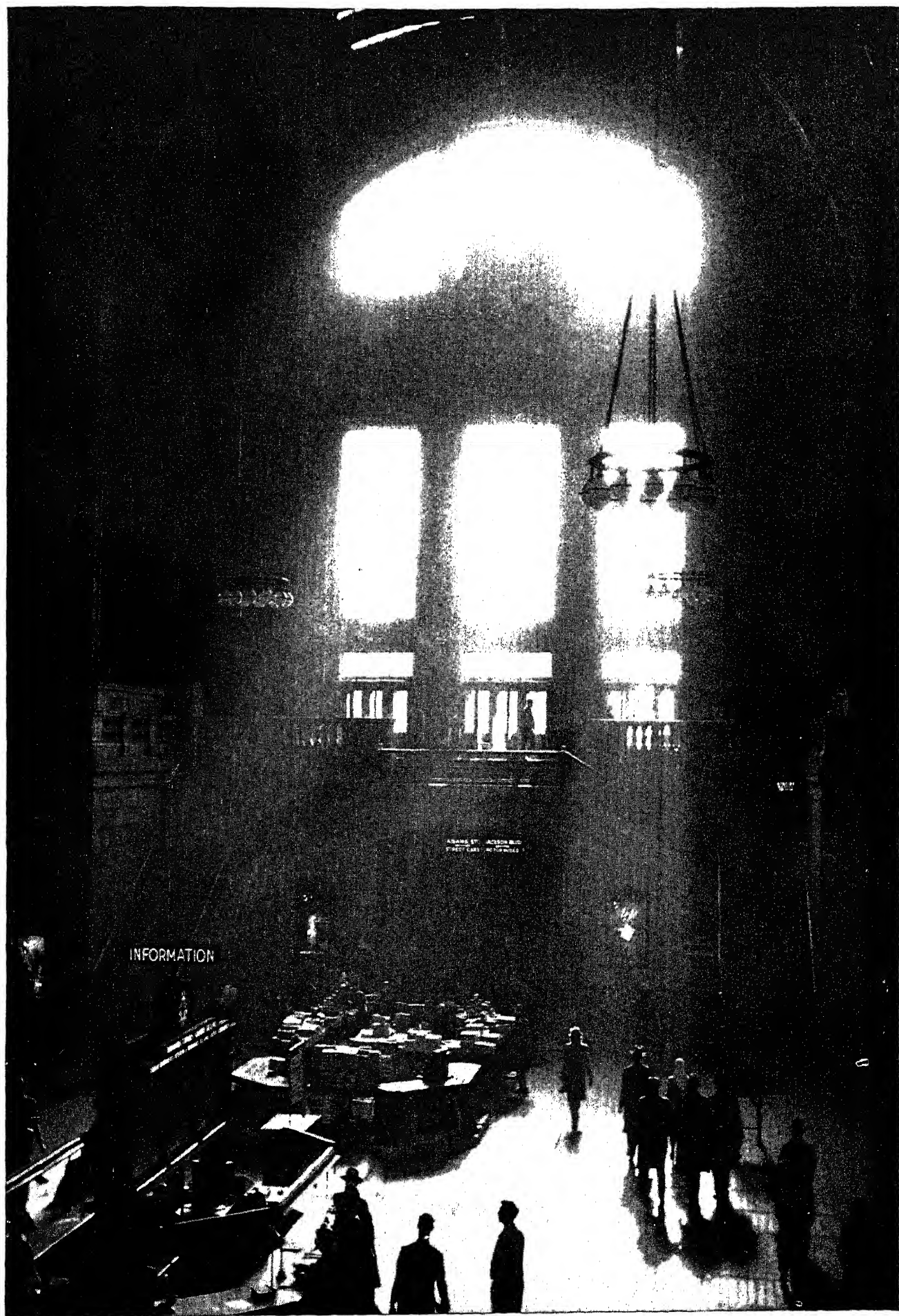
High-speed streamline trains backed by a huge network of detailed operations have widened, dramatically, the shopping range of the modern Granger housewife. Now, in addition to visiting local merchandising centers (*right*) or ordering from the "wish book," the mail order catalogue (*below*), she may travel to the distant big city as casually as her mother used to visit the near-by county seat. Mrs. Scott Rader, farm wife living near Knoxville, five miles from Galesburg, Illinois, is shown on succeeding pages taking the Hannibal-Quincy Zephyr to Chicago, 162 miles away, shopping more than four hours, and arriving home in time for supper.





Mrs. Rader gives chickens and family breakfast, then at her leisure catches Zephyr at Galesburg at 8:45 A.M.



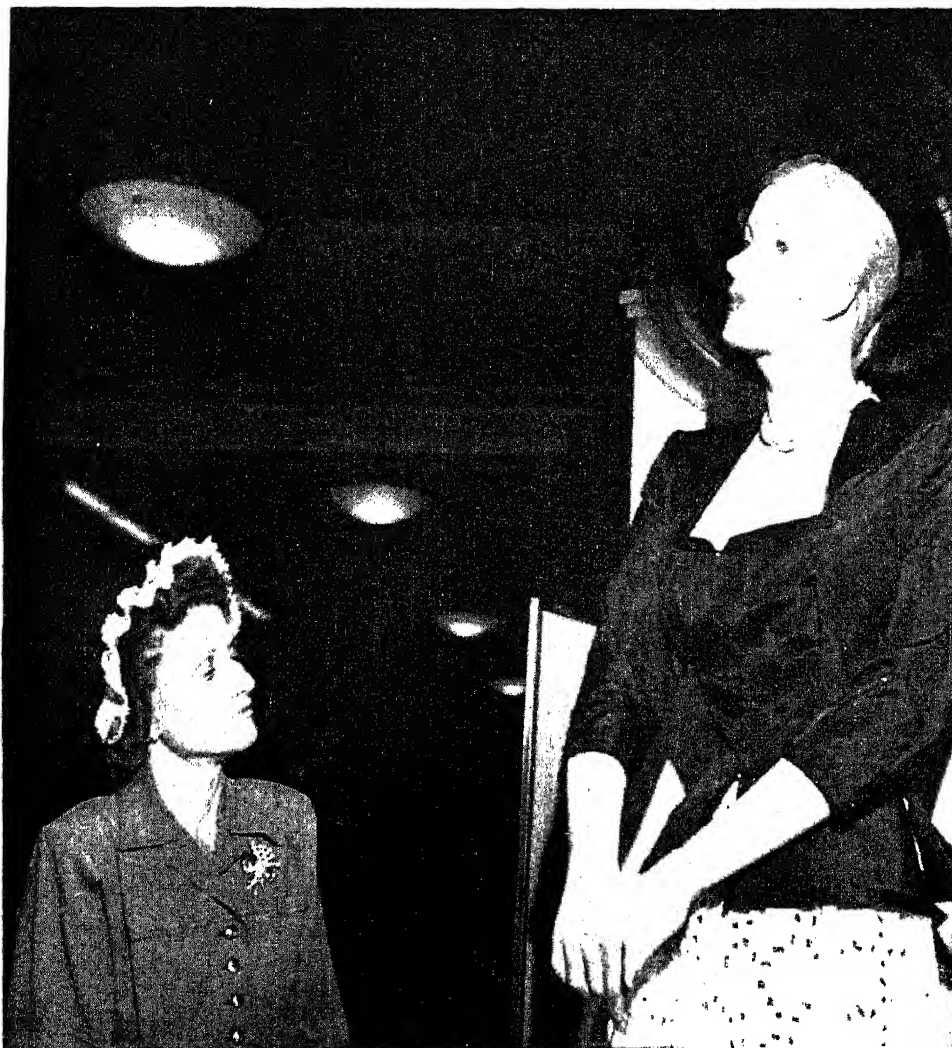


Arriving in Chicago, 11:35 A.M.



Mrs. Rader walks to Marshall Field and Company, most famous of midland department stores for three fourths of a century, and makes purchases.





Mrs. Rader has time for more than four hours' shopping before returning to the Union Station to catch the Hannibal-Quincy Zephyr home.





At 4:40 P.M. Mrs. Rader starts home, arrives at Galesburg at 7:14 and after supper, with the dishes washed, sits at ease with her family — her trip to the far-off city too commonplace to excite conversation, yet it would have cost her mother two full days and a sick headache for a week thereafter.



The Greatest Story Ever Told," by Fulton Oursler.
 "Behind the Curtain," by John Gunther.
 WHO Was
 mal an most who
 The book is a worthy
 piece to the other biographies by
 Maurois.

In Early Days of the Burlington.



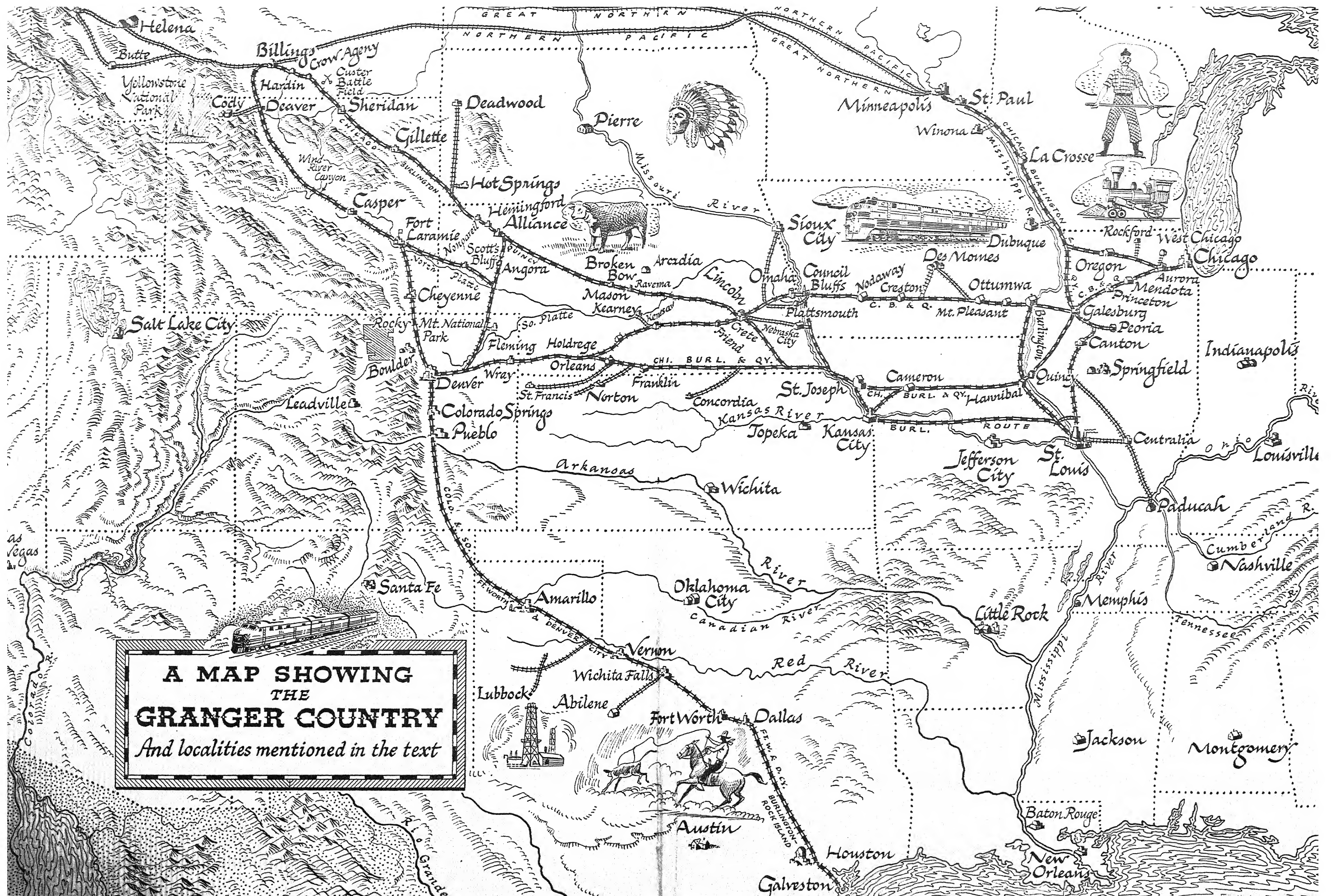
This battle scene, from "The Life of Sam Houston," by C. E. Lester (1855), is included in "Granger Country," a pictorial social history of the Burlington railroad, just published by Little, Brown & Co., Boston (\$5).
 "Granger Country" is chiefly a picture book, but its accompanying texts are well done and add much to the interest of the pictures. Lloyd Lewis, whose death occurred this year, and Stanley Pargellis, the editors, have done an outstanding job in compiling photographs, old

prints and drawings to trace the development of the Middle Western country traversed by the Burlington.

Kansas City and this immediate area get attention in the book. The familiar river front scene, painted in 1852, appears, as does the picture of the July 4, 1869, opening of the Hannibal bridge, and some modern views.

Rail fans will find illustrations of many types of railroad equipment, dating from the beginning of the road to the present age of diesels and vista-dome passenger cars.

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